



TS-109 Turbo Station

User Manual (Version: 1.1.0)



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FOREWORD

Thank you for choosing QNAP products! This user manual provides detailed instructions of using TS-109. Please read carefully and start to enjoy the powerful functions of TS-109!

NOTE

- This manual provides the description of all functions of TS-109. The product you purchased may not support certain functions dedicated to specific models.
- All features, functionality and other product specifications are subject to change without prior notice or obligation.
- All brands and products names referred to are trademarks of their respective holders.

LIMITED WARRANTY




In no event shall the liability of QNAP Systems, Inc. (QNAP) exceed the price paid for the product from direct, indirect, special, incidental, or consequential software, or its documentation. QNAP makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. QNAP reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.









CAUTION

1. Back up your system periodically to avoid any potential data loss. QNAP disclaims any responsibility of all sorts of data loss or recovery.
2. Should you return any components of TS-109 Turbo Station package for refund or maintenance, make sure they are carefully packed for shipping. Any form of damages due to improper packaging will not be compensated.

Table of Contents

Table of Contents	3
Safety Warnings.....	6
Chapter 1 Overview of TS-109 Turbo Station	7
1.1 Introduction	7
1.2 Package Contents.....	8
1.3 Hardware Illustration	9
Chapter 2 Install TS-109.....	10
2.1 Install Hard Disk	10
2.2 Hard Disk Recommendation List	12
2.3 Set up TS-109	14
2.4 Check System Status.....	16
2.5 Configure Software Settings	18
2.5.1 Windows® Users.....	18
2.5.2 Mac Users.....	29
Chapter 3 Start to Enjoy the Powerful Services of TS-109	31
3.1 Server Administration	36
3.2 Quick Configuration 	37
3.3 System Settings 	41
3.3.1 Server Name.....	41
3.3.2 Date & Time	42
3.3.3 Filename Encoding Setting.....	43
3.3.4 View System Settings.....	43
3.4 Network Settings 	44
3.4.1 TCP/ IP Configuration.....	44
3.4.2 Microsoft Networking.....	47
3.4.3 Apple Network.....	49
3.4.4 NFS Service	49
3.4.5 Web File Manager	50
3.4.6 FTP Service.....	51

3.4.7	Multimedia Station.....	53
3.4.8	Download Station	54
3.4.9	Web Server	55
3.4.10	DDNS Service.....	57
3.4.11	MySQL Server	58
3.4.12	Protocol Management	59
3.4.13	View Network Settings.....	60
3.5	Device Configuration 	62
3.5.1	SATA Disk	62
3.5.2	USB Disk.....	63
3.5.3	USB Printer.....	65
3.5.4	eSATA Disk.....	67
3.6	User Management 	69
3.6.1	Users.....	69
3.6.2	User Groups.....	71
3.6.3	Quota	76
3.7	Network Share Management 	78
3.7.1	Create	79
3.7.2	Property.....	80
3.7.3	Access Control	81
3.7.4	Delete.....	81
3.7.5	NFS Access Control	82
3.8	System Tools 	83
3.8.1	Alert Notification.....	84
3.8.2	Restart/ Shutdown.....	84
3.8.3	Hardware Settings	85
3.8.4	UPS.....	86
3.8.5	System Update.....	88
3.8.6	Change Logo.....	89
3.8.7	Remote Replication (Disaster Recovery).....	90
3.8.8	Backup/ Restore/ Reset Settings.....	93
3.8.9	IP Filter.....	93
3.8.10	Network Recycle Bin.....	94
3.8.11	Remote Login	95

3.9	Event Logs 	96
Chapter 4	Copy Data Directly by Front USB Port to TS-109	97
Chapter 5	Multimedia Station	98
5.1	Share Photos and Multimedia Files via Web Interface	98
5.2	Enable iTunes Service	108
5.3	Use UPnP Media Server	110
Chapter 6	Download Station	113
6.1	Use Download Software QGet	123
Chapter 7	Web Server	125
Chapter 8	FTP Server	128
Chapter 9	Web File Manager	132
Chapter 10	NetBak Replicator 	138
Chapter 11	Configuring AD Authentication	153
Chapter 12	Access TS-109 via Linux OS	157
Chapter 13	TS-109 Maintenance	158
13.1	Restart/ Shut down Server	158
13.2	Reset Administrator Password and Network Settings	159
13.3	Disk Failure or Malfunction	160
13.4	Power Outage or Abnormal Shutdown	160
Technical Support		161
GNU GENERAL PUBLIC LICENSE		162

Safety Warnings

1. TS-109 can operate normally in the temperature of 0°C-35°C and relative humidity of 0%-85%. Please make sure the environment is well-ventilated.
 2. The power cord and devices connected to TS-109 must provide correct supply voltage (36W, 90-264V).
 3. Do not place TS-109 in direct sunlight or near chemicals. Make sure the temperature and humidity of the environment are in optimized level.
 4. Unplug the power cord and all connected cables before cleaning. Wipe TS-109 with wet towel. Do not use chemical or aerosol to clean TS-109.
 5. Do not place any objects on TS-109 for the server's normal operation and to avoid overheat.
 6. Use the flat head screws in the product package to fasten the hard disk in TS-109 when installing hard disk for proper operation.
 7. Do not place TS-109 near any liquid.
 8. Do not place TS-109 on any uneven surface to avoid falling off and damage.
 9. Make sure the voltage is correct in your location when using TS-109. If you are not sure, please contact the distributor or the local power supply company.
 10. Do not place any object on the power cord.
 11. Do not attempt to repair your TS-109 in any occasions. Improper disassembly of the product may expose you to electric shock or other risks.
- For any enquiries, please contact the distributor.

Chapter 1 Overview of TS-109 Turbo Station

1.1 Introduction

Thank you for choosing TS-109 Turbo Station. This product has the following key features:

- ✓ 9-in-1 server: Multimedia Station, Download Station, Mirror Station, Disaster Recovery, Web Server, Backup Server, File Server, FTP Server, and Printer Server.
- ✓ Easy-to-use, simple configuration in a few steps and TS-109 is ready to use!
- ✓ Enormous storage capacity, support SATA disk of up to 1TB or above, and extendable to 2TB or more by eSATA/ USB port.
- ✓ Web interface for authority configuration and folder management, even novice can manage the server easily
- ✓ Supports PHP and MySQL/SQLite to establish interactive websites
- ✓ Embedded digital album supports automatic thumbnail generation, easy backup, browsing and sharing of photos
- ✓ Supports UPnP (DLNA compatible) multimedia technology for sharing of multimedia files at home
- ✓ Supports iTunes service to enable computers in LAN to play the songs shared by TS-109 via iTunes.
- ✓ 3 high speed USB 2.0 ports to support multiple USB devices like printer, disk, digital camera, thumb drive, card reader etc. to provide diversified functions.
- ✓ High speed transfer, 480Mbps USB 2.0, Gigabit Ethernet, 1.5GB SATA high speed file transfer. With highly efficient block level algorithm, data transfer can be done instantly.
- ✓ Block level remote replication for secure data backup
- ✓ Incomparable high reliability: NetBak Replicator for instant and schedule backup
- ✓ Stylish aluminum design, the best heat dissipation, shock-resistance, anti-collision aluminum design
- ✓ Fanless design, absolutely quiet
- ✓ BT, HTTP and FTP download independent of computer to minimize electricity expense
- ✓ Supports Network Recycle Bin, files deleted by mistake can be restored

1.2 Package Contents

Your TS-109 package contains:

✓ TS-109 Turbo Station



✓ Adaptor



✓ Power cord



✓ CD-ROM (user manual, Quick Install Wizard and software inclusive)



✓ Quick Installation Guide



✓ Screws



✓ Ethernet cable x 1



✓ Stand x 2



1.3 Hardware Illustration



1. One Touch Copy Button
2. USB 2.0 Port
3. LED Indicators
4. Power Button
5. USB 2.0 Ports
6. eSATA Port
7. Giga LAN Port
8. Configuration Reset Switch
9. Power Cord Hook
10. Power Connector
11. K-lock Security Slot

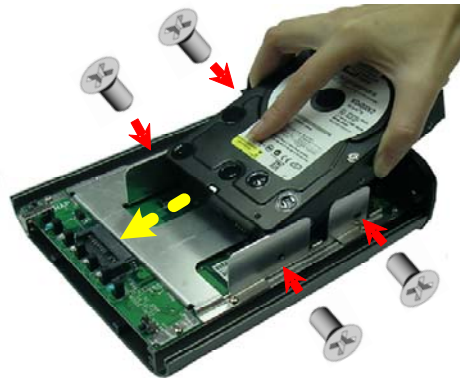
Chapter 2 Install TS-109

2.1 Install Hard Disk

1. Pull out the front case of TS-109 as shown below:



2. Install a hard disk in TS-109 drive plate. Make sure the disk holes of the disk match the holes of drive plate. Lock the disk with the provided flathead screws.



3. After installing the disk, cover TS-109 with the front case and fasten the round head screws. Then place TS-109 vertically on the stands.



2.2 Hard Disk Recommendation List

The following HDD models are verified by QNAP that are compatible with TS-109. It is recommended to use the disk models listed here. Other HDD brands that are not tested by QNAP may or may not work properly with TS-109. For more updated compatible hard disk information, please visit QNAP website at <http://www.qnap.com>.



QNAP disclaims any responsibility for product damage/ malfunction or data loss/ recovery due to misuse or improper installation of hard disks in any occasions for any reasons.

Manufacturer	Product Family	Model Number	Interface	Drive Size (GB)	Buffer Size (MB)
Hitachi	Deskstar 7K1000	HDS721010KLA330	SATA/300	1000	32
Hitachi	Deskstar 7K1000	HDS721075KLA330	SATA/300	750	32
Hitachi	Deskstar T7K500-500	HDT725050VLA360	SATA/300	500	16
Hitachi	Deskstar T7K500-500	HDT725050VLA380	SATA/300	500	8
Hitachi	Deskstar T7K500-400	HDT725040VLA360	SATA/300	400	16
Hitachi	Deskstar T7K500-400	HDT725040VLA380	SATA/300	400	8
Hitachi	Deskstar T7K500-320	HDT725032VLA360	SATA/300	320	16
Hitachi	Deskstar T7K500-320	HDT725032VLA380	SATA/300	320	8
Hitachi	Deskstar T7K500-250	HDT725025VLA360	SATA/300	250	16
Hitachi	Deskstar T7K500-250	HDT725025VLA380	SATA/300	250	8
Hitachi	Deskstar T7K250-250	HDT722525DLA380	SATA/300	250	8
Hitachi	Deskstar T7K250-160	HDT722516DLA380	SATA/300	160	8
Seagate	Barracuda ES	ST3750640NS	SATA/300	750	16
Seagate	Barracuda ES	ST3500630NS	SATA/300	500	16
Seagate	Barracuda ES	ST3400620NS	SATA/300	400	16
Seagate	Barracuda ES	ST3320620NS	SATA/300	320	16
Seagate	Barracuda ES	ST3250620NS	SATA/300	250	16
Seagate	Barracuda ES	ST3250820NS	SATA/300	250	8
Seagate	Barracuda 7200.10	ST3750640AS	SATA/300	750	16
Seagate	Barracuda 7200.10	ST3500630AS	SATA/300	500	16
Seagate	Barracuda 7200.10	ST3400620AS	SATA/300	400	16
Seagate	Barracuda 7200.10	ST3320620AS	SATA/300	320	16
Seagate	Barracuda 7200.10	ST3250620AS	SATA/300	250	16
Seagate	Barracuda 7200.10	ST3250820AS	SATA/300	250	8
Seagate	Barracuda 7200.10	ST3200820AS	SATA/300	200	8
Seagate	Barracuda 7200.10	ST3160815AS	SATA/300	160	8
Seagate	Barracuda 7200.10	ST3160215AS	SATA/300	160	2
WD	WD Caviar RE2	WD5000YS	SATA/300	500	16

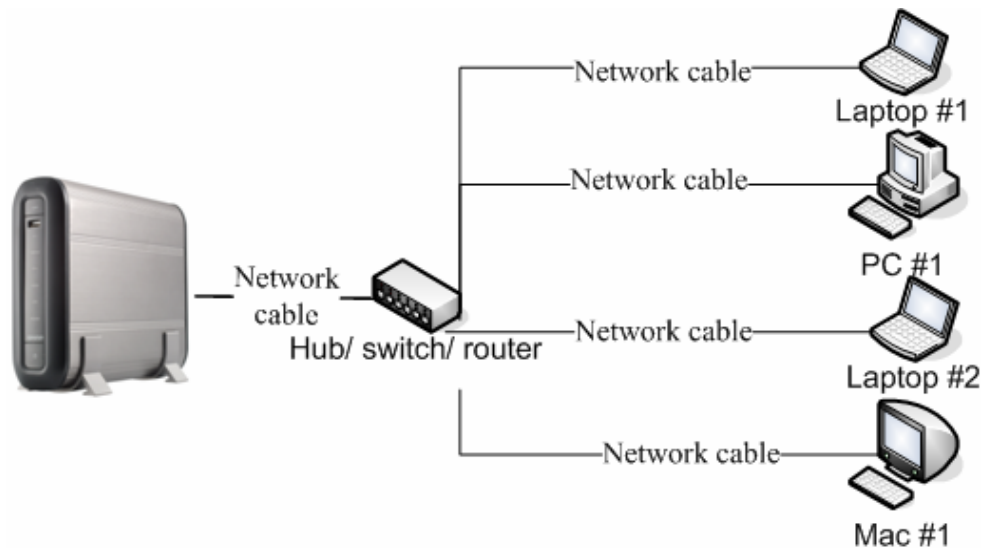
WD	WD Caviar RE2	WD4000YS	SATA/300	400	16
WD	WD Caviar RE	WD3200YS	SATA/300	320	16
WD	WD Caviar RE	WD2500YS	SATA/300	250	16
WD	WD Caviar RE	WD1600YS	SATA/300	160	16
WD	WD Caviar SE16	WD5000AAKS	SATA/300	500	16
WD	WD Caviar SE16	WD4000AAKS	SATA/300	400	16
WD	WD Caviar SE16	WD3200AAKS	SATA/300	320	16
WD	WD Caviar SE16	WD2500AAKS	SATA/300	250	16
WD	WD Caviar SE16	WD5000KS	SATA/300	500	16
WD	WD Caviar SE16	WD4000KS	SATA/300	400	16
WD	WD Caviar SE16	WD3200KS	SATA/300	320	16
WD	WD Caviar SE16	WD2500KS	SATA/300	250	16
WD	WD Caviar SE	WD3200JS	SATA/300	320	8
WD	WD Caviar SE	WD3000JS	SATA/300	300	8
WD	WD Caviar SE	WD2500JS	SATA/300	250	8
WD	WD Caviar SE	WD2000JS	SATA/300	200	8
WD	WD Caviar SE	WD1600JS	SATA/300	160	8
WD	WD Caviar SE	WD1200JS	SATA/300	120	8

2.3 Set up TS-109

Please check your network environment and select the appropriate installation method before installing TS-109.

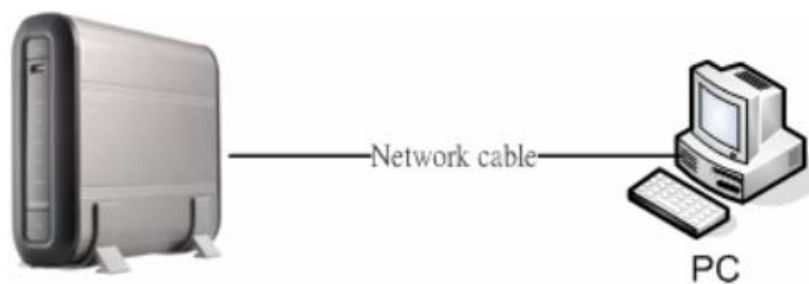
1. Office/ Home

Connect TS-109 and PC to the same hub/ switch/ router.

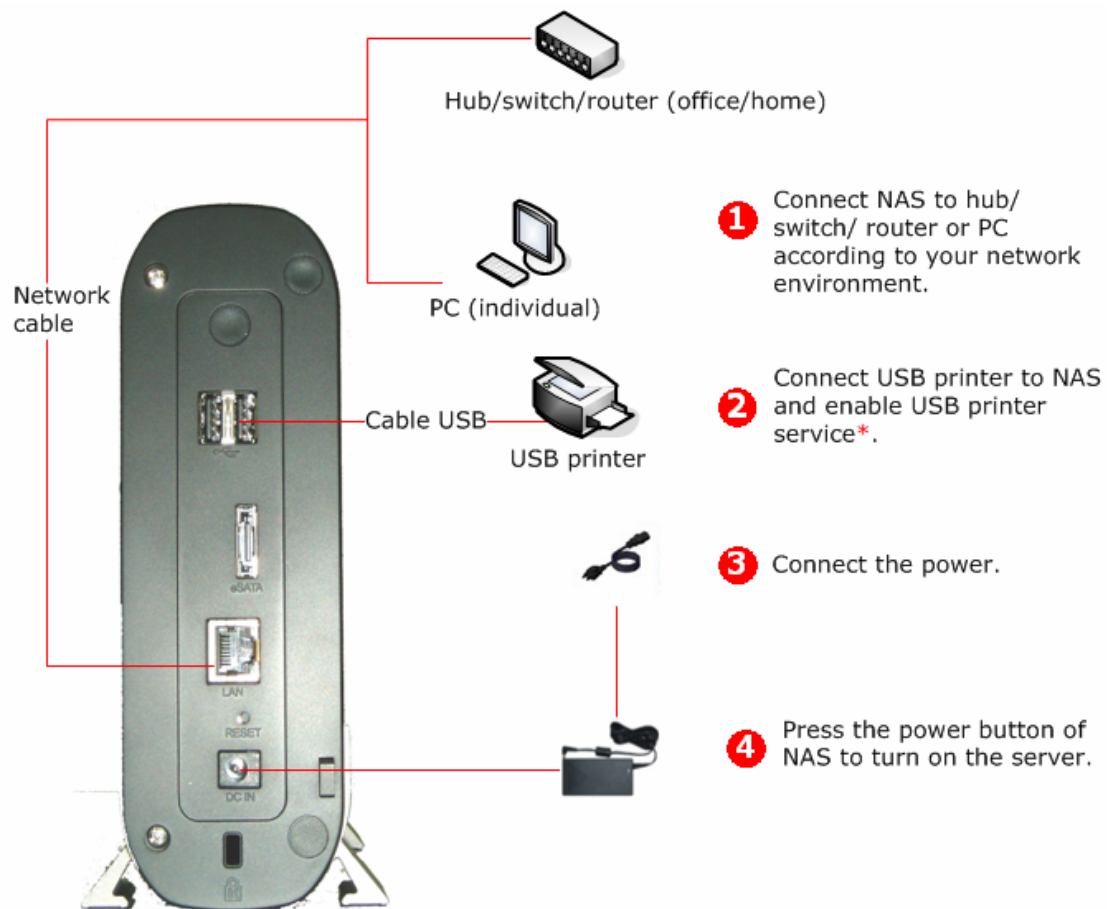


2. Individual

Connect TS-109 directly to your PC by a network cable.



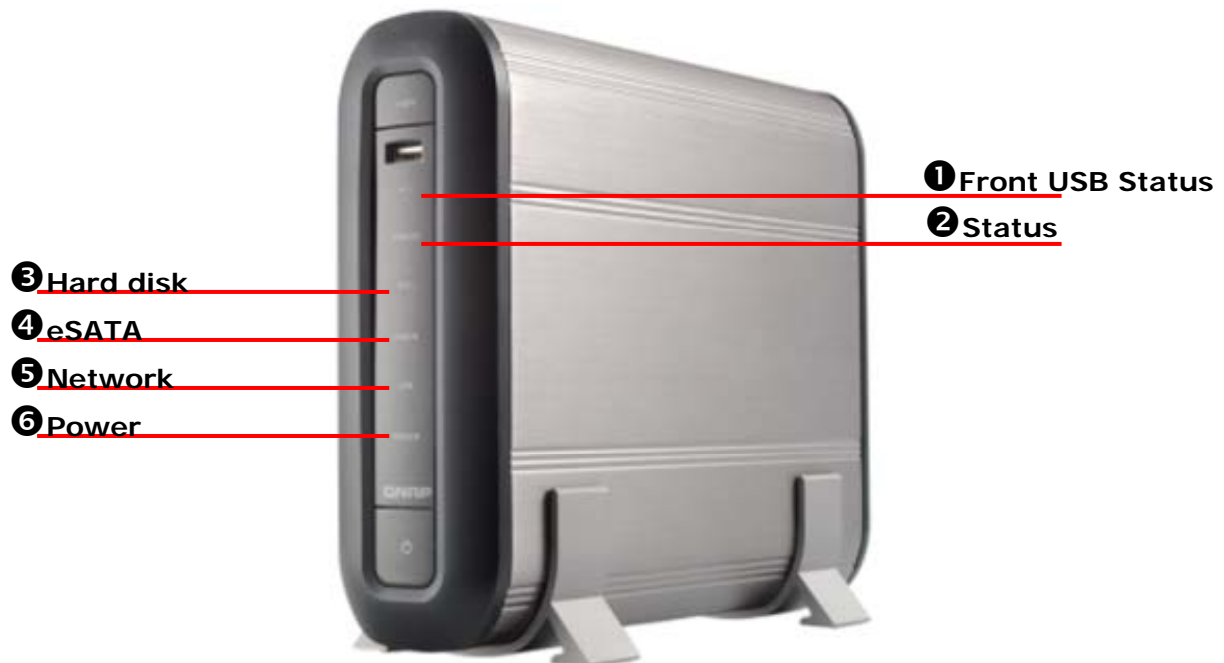
When you have verified your network environment, please follow the steps below to install TS-109.



* **Note:** Please connect a USB printer to the server after the software configuration is completed.

2.4 Check System Status

TS-109 provides LED indicators for you to indicate system status and information easily.



LED Display & System Status Overview

LED	LED Display & System Status
① Front USB Status	Blue: You can press the copy button to copy data
	Blink in blue: Accessing data
② Status	Green: System is normal
	Blink in green: Hard disk not detected; Hard disk not initialized
	Red: Warning on disk full status; Disk capacity is almost full
	Blink in green and red alternatively: Update firmware
③ HDD	Blink in orange: Accessing data
④ eSATA	Blink in orange: Accessing data
⑤ Network	Blink in orange: Accessing data
⑥ Power	Blue: System has started
	Blink in blue: Update firmware

Other Status			
Action	LED	Process	Finish
Update firmware	⑥ Power	Blink in blue	Blue
	② Status	Blink in green and red alternatively	Green (long beep thrice)
System shut down	⑥ Power	Blink in blue	Off
	② Status	Off (short beep once)	Off

2.5 Configure Software Settings

After checking the system status, please follow the steps below to configure the software settings of TS-109. The configuration procedure of Windows® and Mac users are different. Please select the appropriate procedure according to your OS.

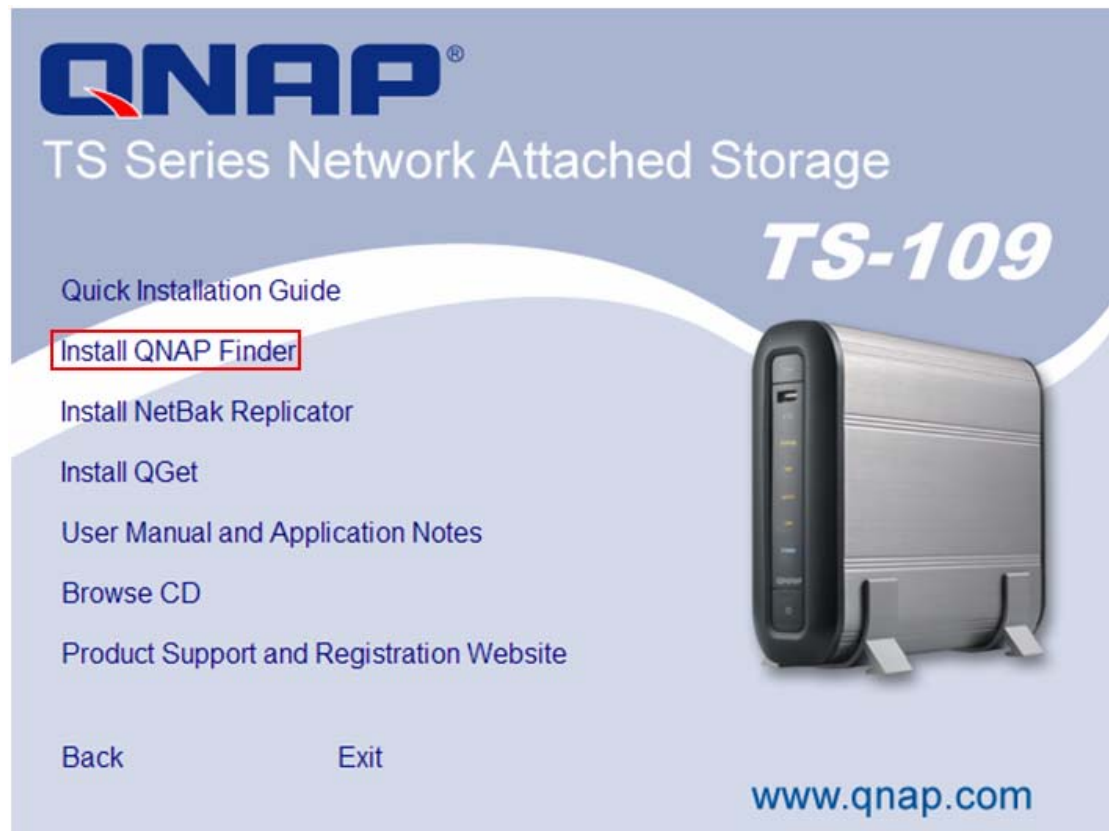
2.5.1 Windows® Users

Insert TS-109 CD-ROM in your PC. Wait for a few seconds until the following screen shows up. Then start to configure the software settings of TS-109.

1. Execute the product CD, a model selection menu will be shown. Select your Turbo Station model to continue.



2. The following menu will be shown. Select "Install QNAP Finder" to continue.

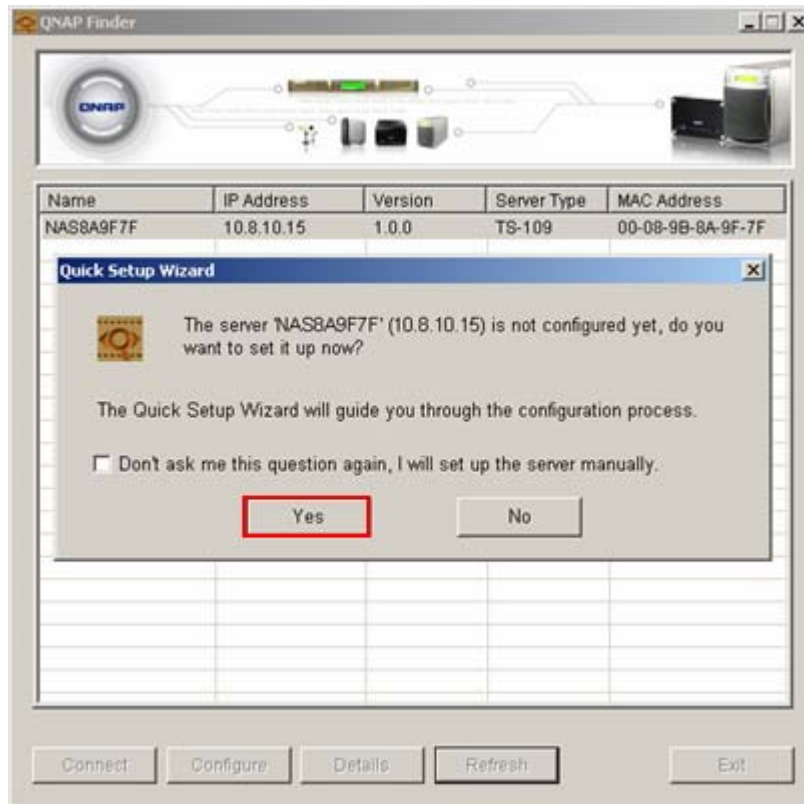


3. Follow screen instructions to install QNAP Finder. QNAP Finder will run automatically. If you are using Windows XP SP2, the following screen will be shown. Please select “Unblock”



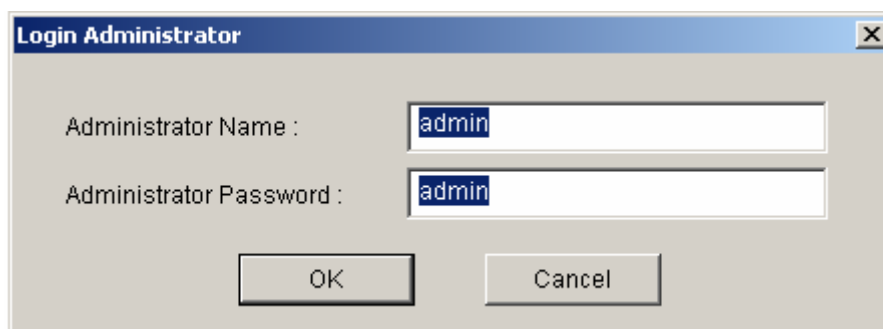
4. QNAP Finder will detect the Turbo Station in the network and ask if you want to perform quick setup. Click **Yes** to continue.

Note: If the server is not found, click Refresh to try again.

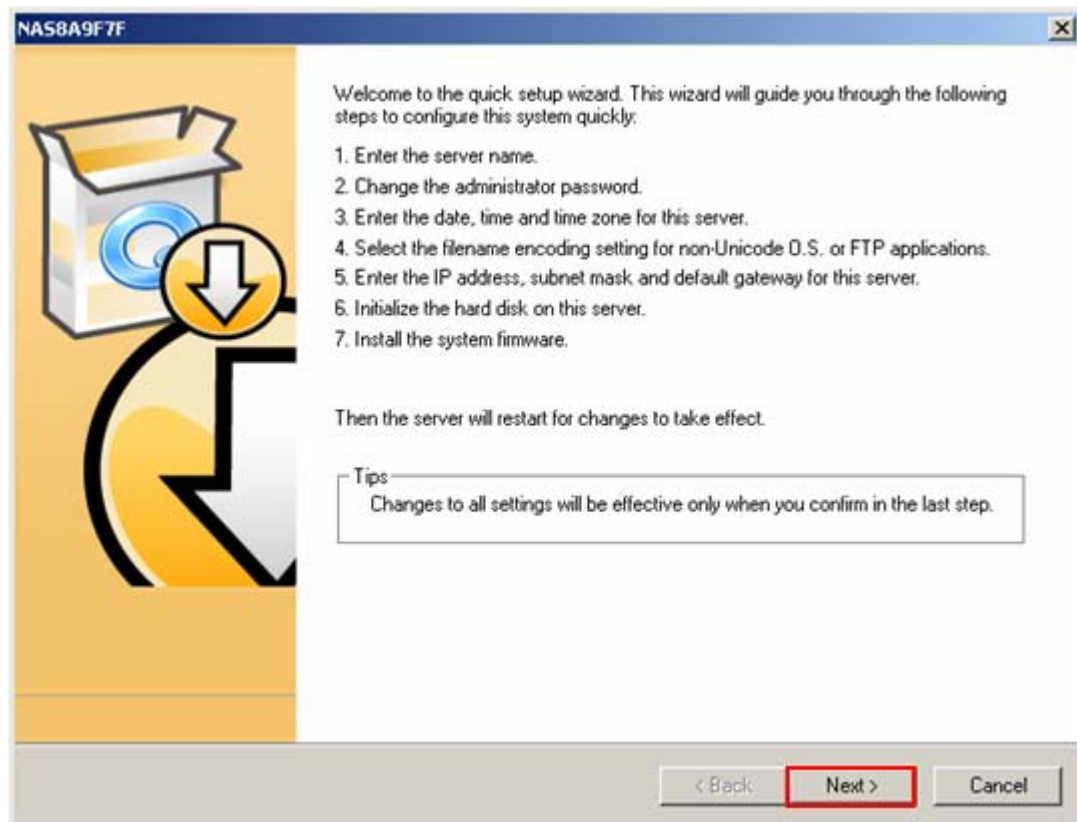


5. Enter the default user name and password.

Default user name: **admin**
Password: **admin**

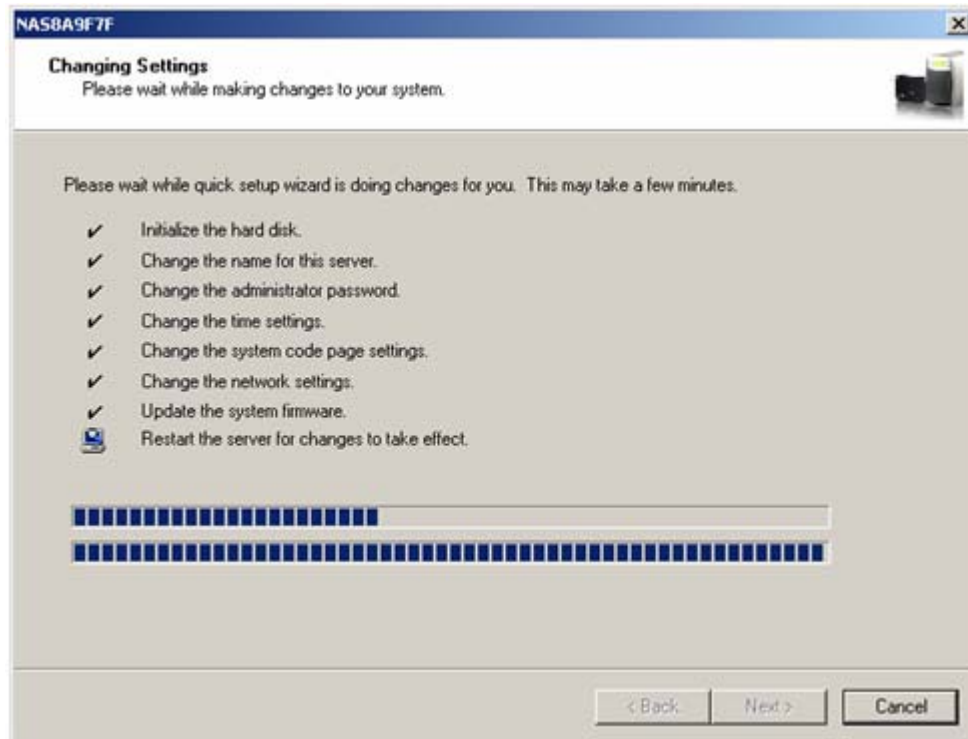


6. The first page of the Quick Setup Wizard will be shown. Click **Next** to continue and complete the configuration.



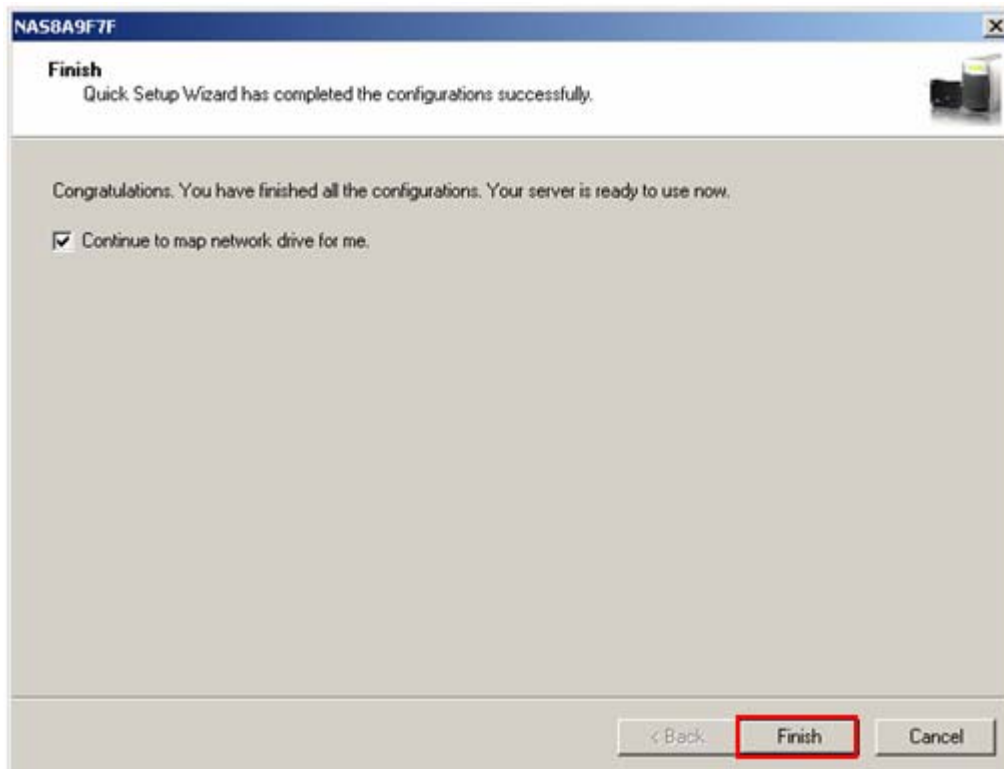
Note: Please make sure that you have installed a hard disk drive on the Turbo Station.

7. Follow the on-screen instructions to complete the configuration. Please wait patiently while changing the system settings. Turbo Station will restart after changing the settings.



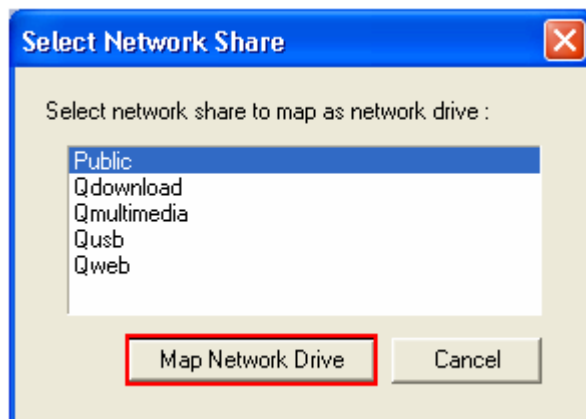
Note: The configuration process may take up to twenty minutes if you are using a hard disk drive with capacity larger than 500GB.

8. After quick setup is completed, click **Finish** to continue.



9. To map the share folder on Turbo Station as your drive, check the option “Continue to map network drive for me” and follow the steps below to proceed.

- a. Turbo Station provides several default share folders for sharing and access. Select the share folder to be mapped as the local drive and click **Map Network Drive**.

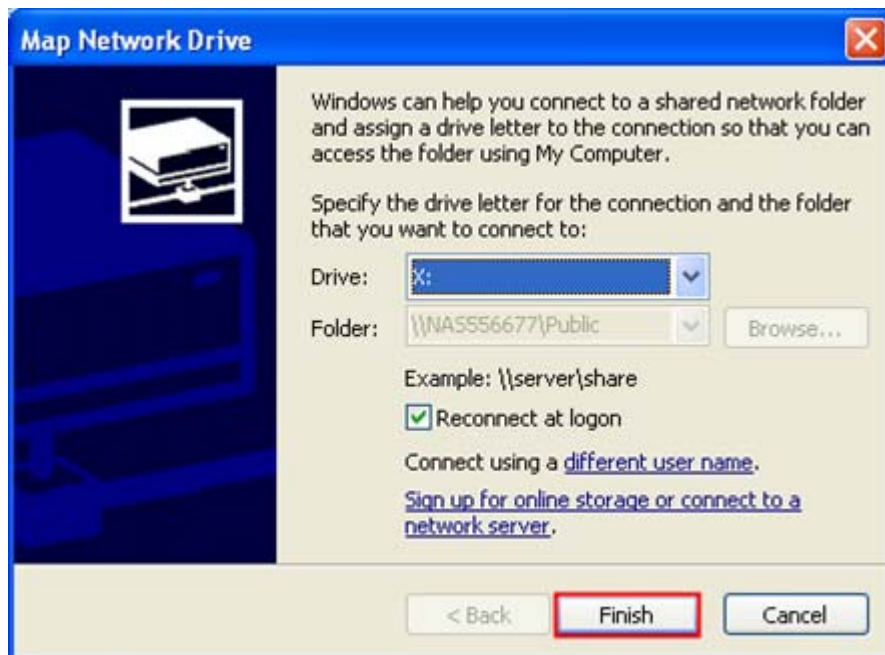


Note: Qdownload, Qmultimedia, Qusb, and Qweb are default network share folders of Turbo Station for the use of Download Station, Multimedia Station, USB auto-copy and Web Server respectively.

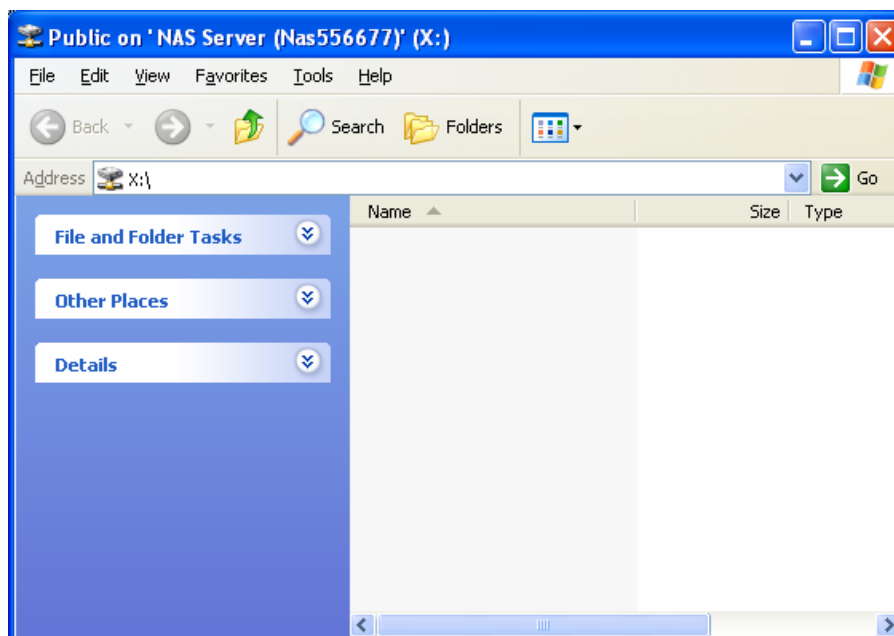
- b. Enter the default user name and password.



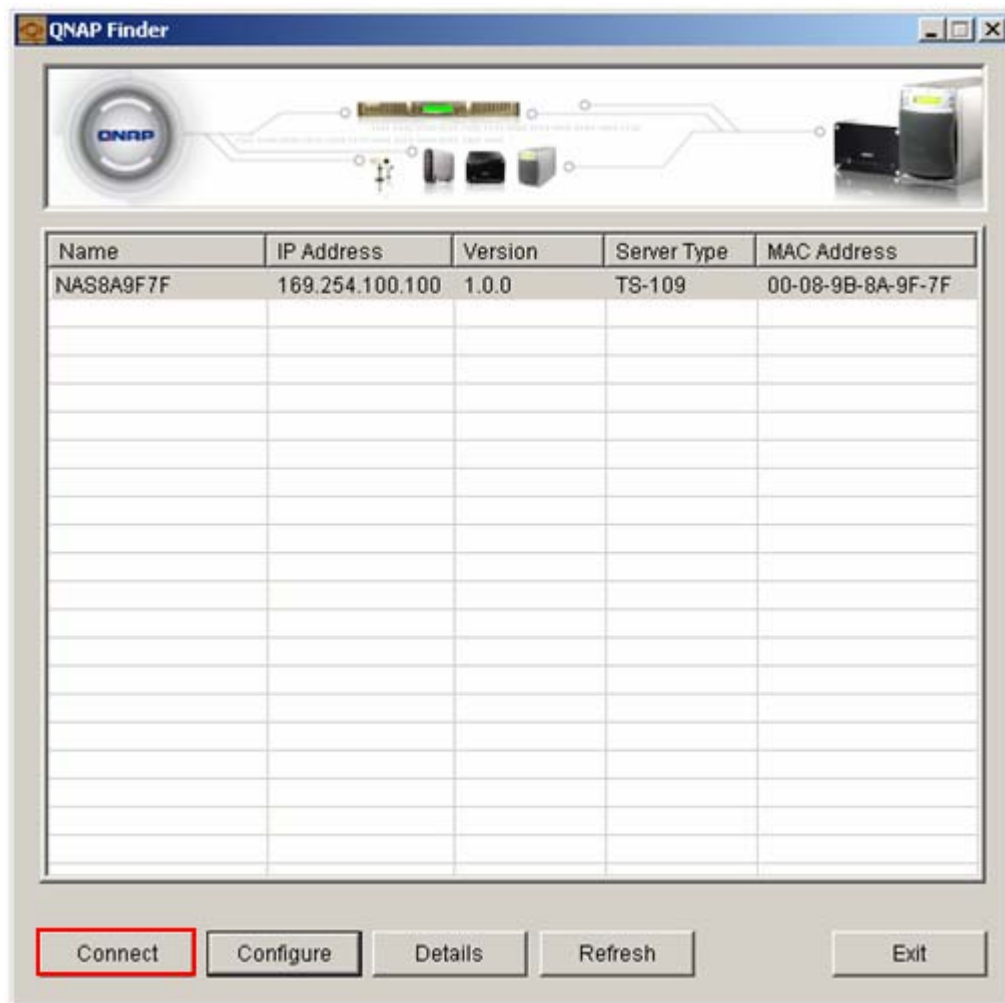
- c. Select the drive letter for the connection and click **Finish**.




- d. Upon successful connection, you can start to use the share folder on TS-109. You can access these folders by opening My Computer.



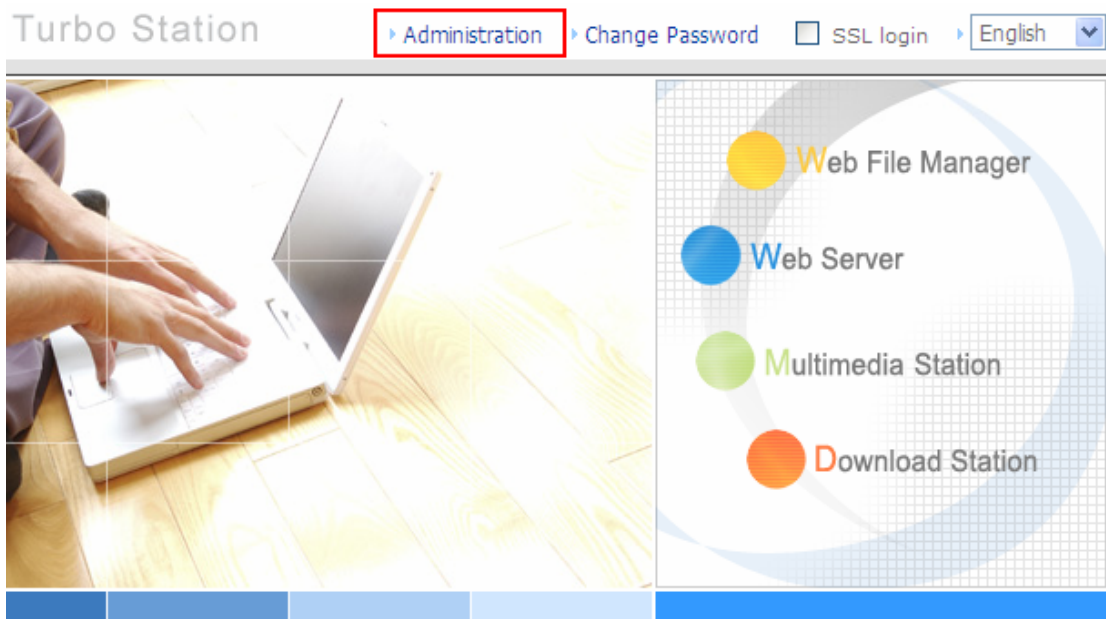
10. QNAP Finder will appear when all configurations are completed. Choose the name of Turbo Station on the list, and click the **Connect** button.



11. When the administration page of TS-109 is shown, you can start to use the services. If you have any questions during web administration, please click the help button  on the top right hand corner of the page.

To modify system settings, click **Administration**. Enter the user name and password to login.

Default user name: **admin**
Password: **admin**

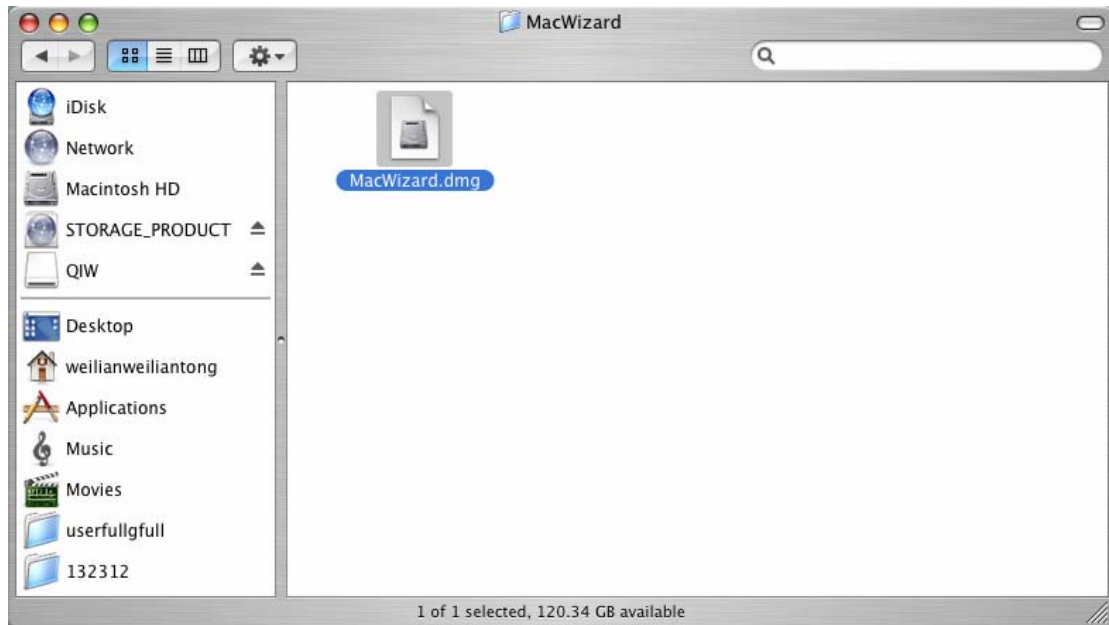


Note:

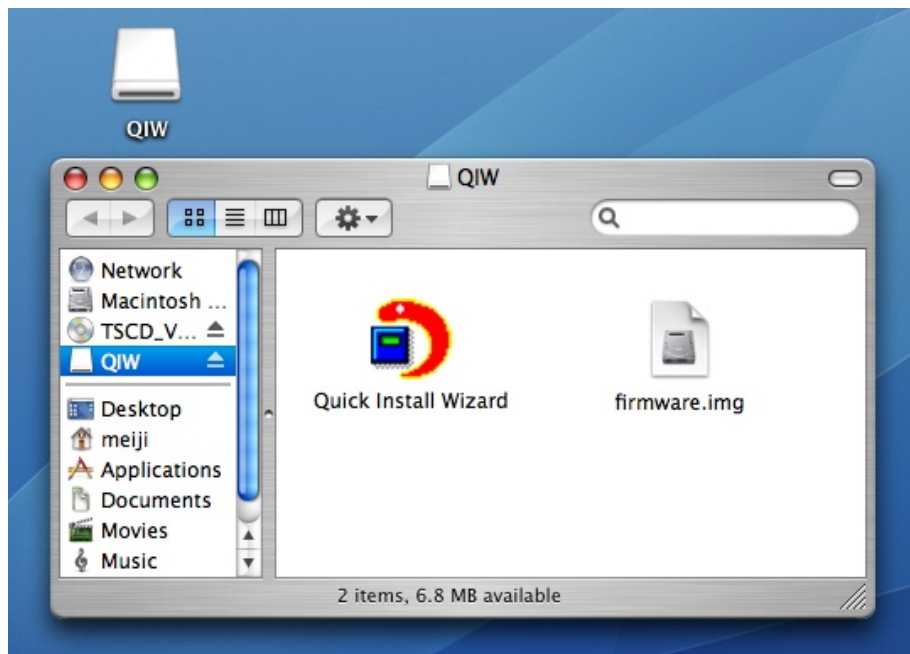
- It is recommended to use Internet Explorer 6.0 or above to access TS-109. If the OS of your PC is Windows® 98, TS-109 supports Internet Explorer 6.0 or above only.
- TS-109 also supports Mozilla Firefox.

2.5.2 Mac Users

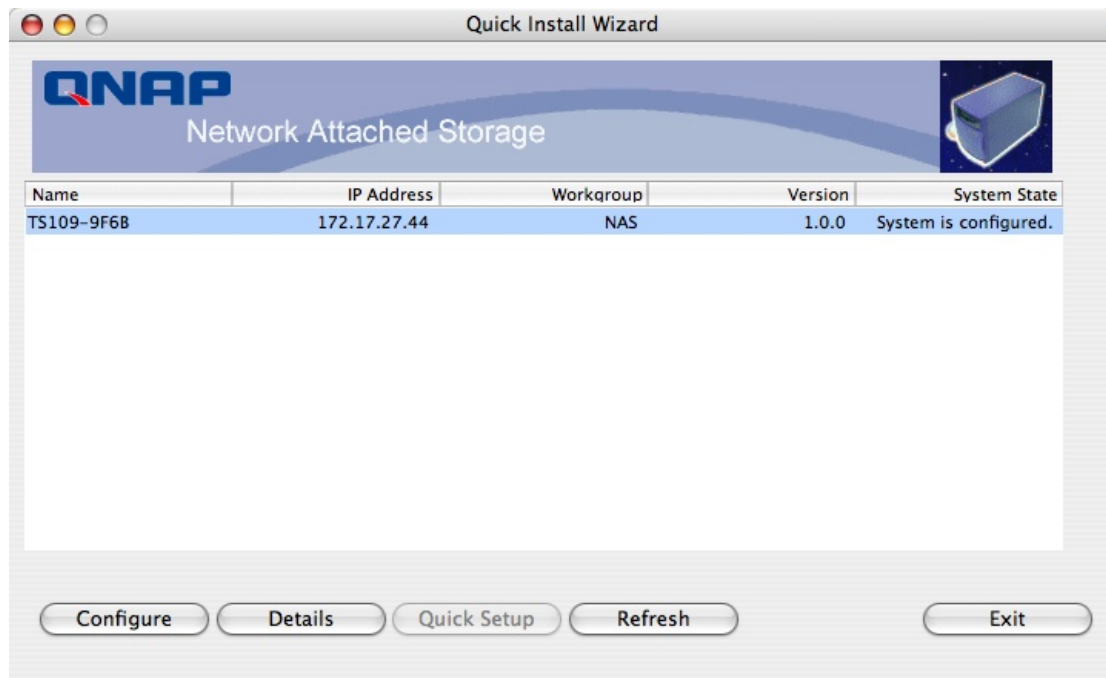
Insert TS-109 CD-ROM in your Mac and find the directory **MacWizard**. Then run **MacWizard.dmg**.



You can find and run the QIW image file on desktop after MacWizard.dmg is opened. Run Quick Install Wizard.



Follow the on-screen instructions to complete the configuration. Please wait patiently while changing the system settings. Turbo Station will restart after changing the settings.



Note:

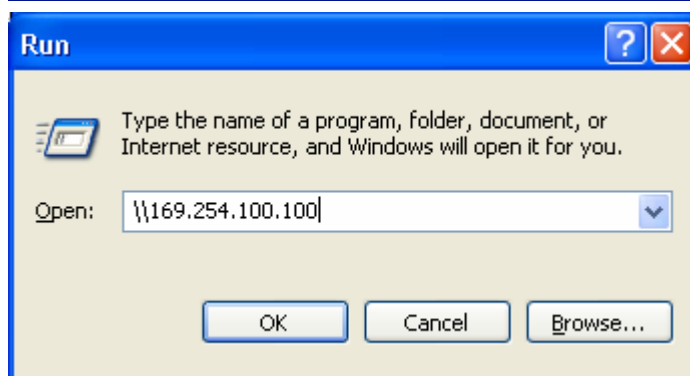
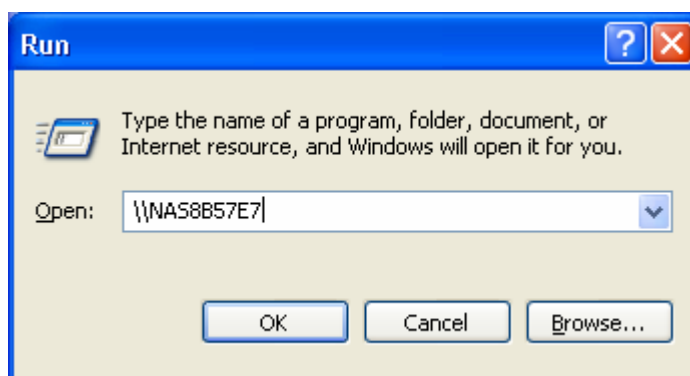
1. Mac Quick Install Wizard does not support mapping network drive.
2. The Map Drive function of Windows QNAP Finder is replaced as "Quick Setup" in Mac Quick Install Wizard.
3. It is recommended to access TS-109 by Mozilla Firefox in Mac. Safari does not support Download Station of TS-109.

Chapter 3 Start to Enjoy the Powerful Services of TS-109

TS-109 provides the following powerful functions and applications.

A. Use network share-Public folder

1. You can access the public folder of TS-109 by the following means:
 - a. Open My Network Places and find the workgroup of TS-109. If you cannot find the server, please browse the whole network to search for TS-109. Double click the name of TS-109 for connection.
 - b. Use Run function in Windows. Enter **\\[TS-109 name]*** or **\\[TS-109 IP]#** to access share folder on TS-109.



- c. Windows® users can use Quick Install Wizard to find TS-109. When the administration page is shown, click **Web File Manager**. Enter the user name and password, and then start to manage TS-109.
2. You can upload files to the Public folder.

B. Manage TS-109

■ **Manage TS-109 using web browser by Windows® or Mac**

1. You can access TS-109 web administration page by the following methods:
 - a. Use Quick Install Wizard to find TS-109.
 - b. Open a web browser and enter **http://[TS-109 IP]:8080#**



Note:

1. It is recommended to use Microsoft® Internet Explorer 6.0 or above to access TS-109. If the OS of your PC is Windows® 98, TS-109 supports Internet Explorer 6.0 only.
2. Please use Mozilla Firefox to access TS-109 in Mac.

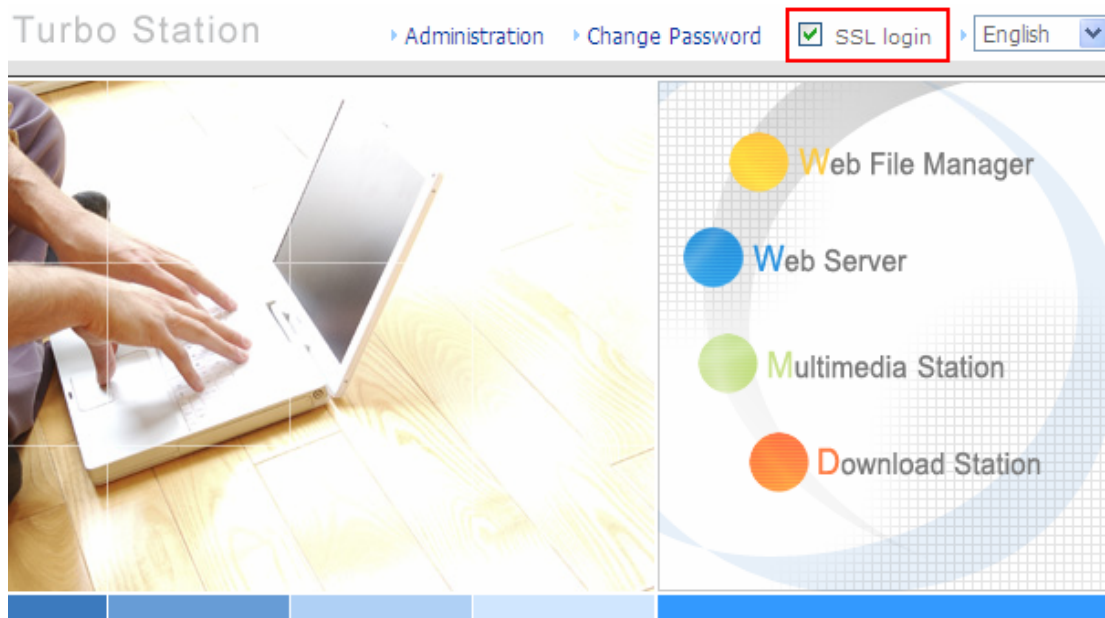
***The user name here should be the same as the server name you enter in Chapter 2.5 **Configure Software Settings**.**

#The IP address here should be the same as the IP address you enter in Chapter 2.5 **Configure Software Settings. If you are using DHCP: (a) connect the PC to TS-109 directly, please use the default IP address 169.254.100.100:8080 of TS-109; (b) connect TS-109 by network, please run Quick Install Wizard to view the IP address of TS-109.**

2. When the administration page is shown, click **Administration, Web File Manager, Web Server, Multimedia Station, or Download Station**. Enter the user name and password, and then start to manage TS-109.
3. TS-109 supports SSL secure login which enables you to configure and manage the server by encrypted transfer. To use this function, check the box **SSL login** on the administration page and login the server.



Note: If your TS-109 is placed behind an NAT gateway and you want to access TS-109 by secure login from the Internet, you must open the port 443 on your NAT and forward this port to TS-109 LAN IP.



C. Use TS-109 Services

■ Multimedia Station

TS-109 provides a user-friendly web management interface for you to manage and share personal albums and multimedia files via network easily. Supports embedded iTunes Server music sharing, UPnP and DLNA standard multimedia technology to establish home multimedia sharing center. Please refer to Chapter 5.

■ Download Station

TS-109 supports BT, HTTP, and FTP download. You can add download tasks to TS-109 and let the server finish downloading independently of your PC. Please refer to Chapter 6.

■ Mirror Station

Provides unique Q-RAID 1 technology which enables mirroring data backup to external USB/ eSATA disk. Please refer to Chapters 3.5.2 and 3.5.4.

■ Disaster Recovery

TS-109 supports remote share folder backup via the network. In case of data damage in your PC, you can restore all backup data. Please refer to Chapter 3.8.7.

■ Web Server

TS-109 enables you to create your own website easily. It also supports PHP and MySQL/SQLite to establish interactive websites. Please refer to Chapter 7.

■ Printer Server

TS-109 supports network printer sharing function by direct USB connection. No extra help from PC is needed. Please refer to Chapter 3.5.3.

■ FTP Server

TS-109 offers the simplest FTP server setup procedure for you to establish FTP server without any professional assistance. Please refer to Chapter 8.

■ **Backup Server**









NetBak Replicator is powerful backup software designed for Windows® users to configure automatic backup schedule. Block level remote replication is supported to provide the most reliable, instant and secure data backup mechanism. Please refer to Chapter 10.

■ **File Server**


TS-109 provides convenient and secure file server functions that support central data management. Users can be granted with the right to access network share and share important files. Please refer to Chapter 3.7 and Chapter 9.


3.1 Server Administration


There are 8 main sections in server administration:

	Quick Configuration Quick step-by-step server setup
	System Settings Server Name · Date & Time · Filename Encoding Setting · View System Settings
	Network Settings TCP/IP Configuration · Microsoft Networking · Apple Networking · NFS Service · Web File Manager · FTP Service · Multimedia Station · Download Station · Web Server · DDNS Service · MySQL Server · Protocol Management · View Network Settings
	Device Configuration SATA Disk · USB Disk · USB Printer · eSATA Disk
	User Management Users · User Groups · Quota
	Network Share Management Create · Property · Access Control · Delete · NFS Access Control
	System Tools Alert Notification · Restart/ Shutdown · Hardware Settings · System Update · Change Logo · Remote Replication · Backup/ Restore/ Reset Settings · Network Recycle Bin
	Event Logs Event Logs

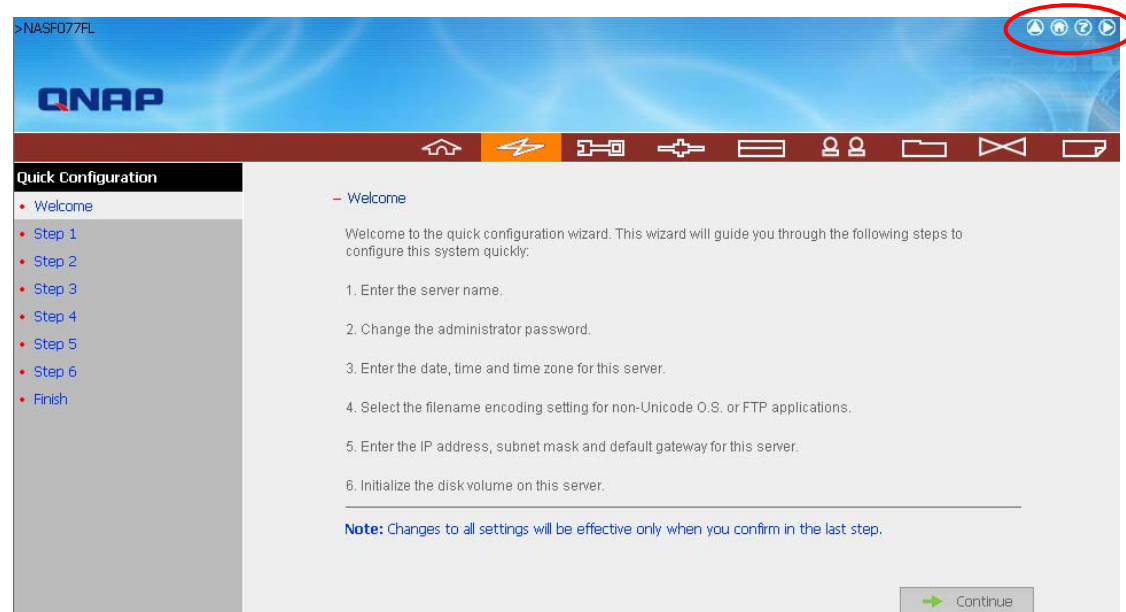
3.2 Quick Configuration

Please follow the step-by-step guide in Quick Configuration to complete the settings of TS-109. If you have any questions during web administration, please click the help button  on the top right hand corner of the page. Other buttons are described as below:

: Return to previous page

: Return to home page

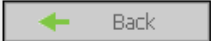
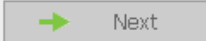
: Logout system



Step 1. Enter the server name.

1. Enter the name for this server.

Server Name :

 Back  Next

Step 2. Change the administrator password or select to use the original password.

2. Change the administrator password.

Password :

Verify Password :

☐ Use the original password

Note: If you select "Use the original password", the administrator password will not be changed.

Step 3. Enter the date, time and select the time zone for the server.

3. Enter the date, time and time zone for this server.

Time Zone : (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London ▼

Current date and time : 2005 / 11 / 22 PM 05 : 33 : 53

☐ Change the server's time and date as below:

Date: January ▼ , (mm dd, yyyy)

Time: : : AM ▼ (hh:mm:ss)

☐ Use the specified NTP server

IP Address of NTP Server (Status: --)

Time Interval minute(s) ▼

Step 4. Select the language the server uses to display files and directories. The default setting is **English**.

4. Select the filename encoding setting for non-unicode O.S. or FTP applications.

Filename Encoding: English ▼

- Chinese-Simplified
- Chinese-Traditional
- Cyrillic
- Greek
- Icelandic
- Japanese
- Korean
- Slavic/Latin 2
- English**
- Western Europe/Latin 1

Step 5. Enter the IP address, subnet mask and default gateway for the server.

– 5. Enter the IP address, subnet mask and default gateway for this server.

☒ Obtain TCP/IP settings automatically via DHCP
☐ Use the following settings

IP Address:



Subnet Mask:

Default Gateway:

Primary DNS Server

Secondary DNS Server

Note: If you don't need a default gateway for this server, please enter "0.0.0.0".

 Back  Next



Note:



1. Please contact your ISP or network administrator for the IP address of primary and secondary DNS servers. When TS-109 plays the role as a terminal and needs to perform independent connection, e.g. BT download, you must enter at least one DNS server IP for proper URL connection. Otherwise, the function may not work properly.
2. If you select to obtain IP address via DHCP, there is no need to configure the primary and secondary DNS servers. You can enter "0.0.0.0" in the settings.

Step 6. Initialize disk volume in TS-109 for the first time configuration.

– 6. Configure disk volume on this server.

Initialize disk ☒ Yes ☐ No

Note: If you choose "Yes", all data on the disk will be deleted.

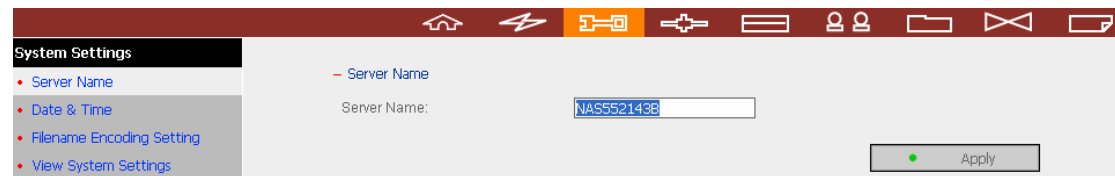
 Back  Next

Step 7. When TS-109 is initialized, the basic settings will be shown.



3.3 System Settings

Basic system settings include the server name, date, time, and view system settings.



The screenshot shows a web interface for 'System Settings'. At the top is a dark red navigation bar with icons for home, settings, and other functions. Below the bar is a sidebar with a list of settings: 'Server Name', 'Date & Time', 'Filename Encoding Setting', and 'View System Settings'. The 'Server Name' option is selected. The main content area shows a 'Server Name' label, a text input field containing 'NAS552143E', and an 'Apply' button with a green status indicator.

3.3.1 Server Name

Enter the name of TS-109. The server name can be 14 characters long at maximum, which supports alphabets, numbers and hyphen (-). The server does not accept names with space, period (.), or names in pure number.



This is a close-up of the 'Server Name' section from the screenshot above. It shows the 'Server Name' label, the text input field with 'NAS552143' (the last character 'E' is not visible), and the 'Apply' button with a green status indicator.

3.3.2 Date & Time

Set the date, time, and time zone according to your location. If the settings are incorrect, the following problems may occur:

- ✓ When using a web browser to access the server or save a file, the display time of the action will be incorrect.
- ✓ The time of event log displayed will be inconsistent with the actual time when an action occurs.

– Adjust the date, time and time zone of this server

Time Zone: (GMT+08:00) Taipei

Current date and time: 2006 / 1 / 9 PM 04 : 25 : 15

☒ Change date and time manually

Date: January , (mm dd, yyyy)

Time: : AM (hh:mm:ss)

☐ Synchronize with an Internet time server automatically

Server: pool.ntp.org Update now (Status: --)

Time Interval: 1 day(s)

Apply

✓ Synchronize with an Internet time server automatically

You can enable this option to update the date and time of the system automatically with specified NTP (Network Time Protocol) server. Enter the IP address or domain name of the NTP server, e.g. time.nist.gov, time.windows.com. Then enter the time interval for adjusting the time.

☒ Synchronize with an Internet time server automatically

Server: pool.ntp.org Update now (Status: --)

Time Interval: 1 day(s)

Apply



Note: The first time you enable NTP server, it may take several minutes for time synchronization before the time is correctly adjusted.

3.3.3 Filename Encoding Setting

Select the language TS-109 uses to display files and directories.



Note: All files and directories on TS-109 will be created using Unicode encoding. If your FTP clients or the OS of your PC does not support Unicode, e.g. Windows® 95/98/ME, select the language the same as your OS here in order to view the files and directories on the server properly.

- Filename Encoding Setting

Filename Encoding:

 Apply

3.3.4 View System Settings

You can view all current system settings, e.g. server name, on this page.


- View System Settings

Server Name	
Server Name	NAS8A6B10

Date & Time	
Date	December 11, 2006
Time	11:28:43 AM
Time Zone	(GMT+08:00) Taipei

Filename Encoding	
Code Page	English (437)

System Information	
Version	2.0.0 Build 1130T

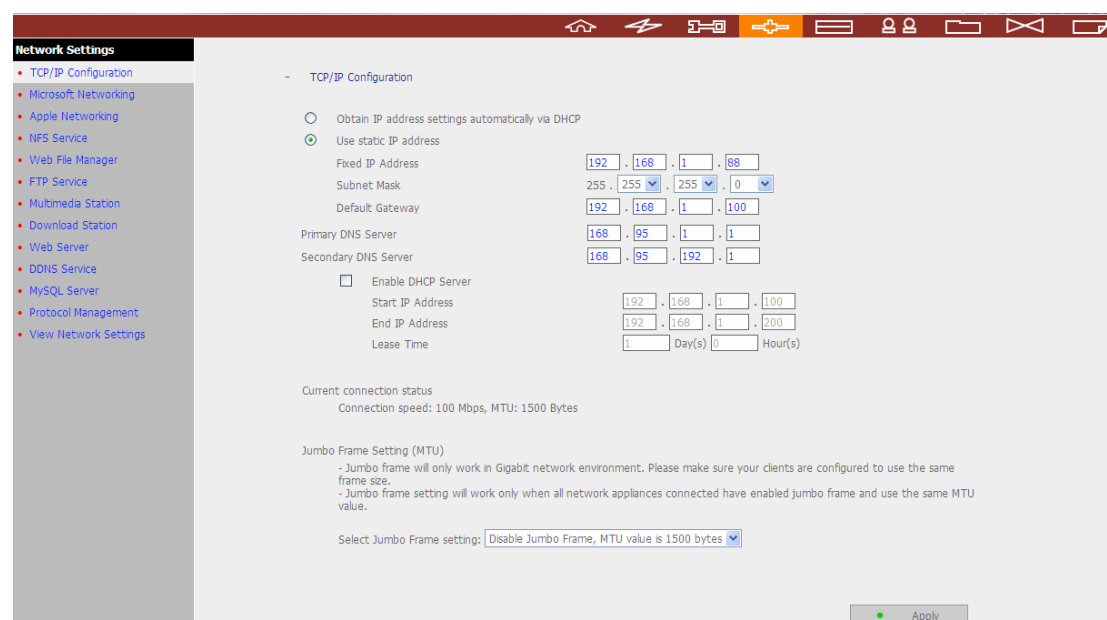
 OK

3.4 Network Settings

You can configure network settings in this section and enable several powerful applications of TS-109, e.g. Multimedia Station, Download Station, and Web Server.

3.4.1 TCP/ IP Configuration

You can select one of the following two methods to configure the TCP/IP settings of TS-109.



The screenshot shows the 'Network Settings' window with the 'TCP/IP Configuration' tab selected. The window has a sidebar on the left with a list of settings: TCP/IP Configuration, Microsoft Networking, Apple Networking, NFS Service, Web File Manager, FTP Service, Multimedia Station, Download Station, Web Server, DDNS Service, MySQL Server, Protocol Management, and View Network Settings. The main area is titled 'TCP/IP Configuration' and contains two radio buttons: 'Obtain IP address settings automatically via DHCP' (which is selected) and 'Use static IP address'. Below these are fields for 'Fixed IP Address' (192.168.1.88), 'Subnet Mask' (255.255.255.0), and 'Default Gateway' (192.168.1.100). There are also fields for 'Primary DNS Server' (168.95.1.1) and 'Secondary DNS Server' (168.95.192.1). A checkbox for 'Enable DHCP Server' is unchecked. Below this are fields for 'Start IP Address' (192.168.1.100), 'End IP Address' (192.168.1.200), and 'Lease Time' (1 Day(s) 0 Hour(s)). At the bottom, there is a section for 'Jumbo Frame Setting (MTU)' with a note about Gigabit network environments and a dropdown menu set to 'Disable Jumbo Frame, MTU value is 1500 bytes'. An 'Apply' button is at the bottom right.

- **Obtain IP address settings automatically via DHCP**

If your network supports DHCP, TS-109 will use DHCP protocol to retrieve the IP address and related information automatically.

- **Use static IP address**

To use fixed IP address for network connection, enter fixed IP address, subnet mask and default gateway.

Primary DNS Server: Enter the IP address of primary DNS server that provides DNS service for TS-109 in external network.

Secondary DNS Server: Enter the IP address of secondary DNS server that provides DNS service for TS-109 in external network.



Note:

1. Please contact your ISP or network administrator for the IP address of primary and secondary DNS servers. When TS-109 plays the role as a terminal and needs to perform independent connection, e.g. BT download, you must enter at least one DNS server IP for proper URL connection. Otherwise, the function may not work properly.
2. If you select to obtain IP address via DHCP, there is no need to configure the primary and secondary DNS servers. You can enter "0.0.0.0" in the settings.

Enable DHCP Server

If no DHCP is available in the LAN where TS-109 locates, you can enable this function to enable TS-109 as a DHCP server and allocate dynamic IP address to DHCP clients in LAN.

You can set the range of IP addresses allocated by DHCP server and the lease time. Lease time refers to time that IP address is leased to the clients by DHCP server. When the time expires, the client has to acquire an IP address again.

For example, to establish a DLNA network, and share the multimedia files on TS-109 to DLNA DMP via UPnP while there is no NAT gateway that supports DHCP server, you can enable DHCP server of TS-109. TS-109 will allocate dynamic IP address to DMP or other clients automatically and set up a local network.



Note: If there is an existing DHCP server in your LAN, do not enable this function. Otherwise, there will be IP address allocation and network access errors.

<input checked="" type="checkbox"/> Enable DHCP Server	
Start IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="100"/>
End IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="200"/>
Lease Time	<input type="text" value="1"/> Day(s) <input type="text" value="0"/> Hour(s)

Jumbo Frame Settings (MTU)

"Jumbo Frames" refer to Ethernet frames that are larger than 1500 bytes. It is designed to enhance Ethernet networking throughput and reduce the CPU utilization of large file transfers by enabling more efficient larger payloads per packet.

Maximum Transmission Unit (MTU) refers to the size (in bytes) of the largest packet that a given layer of a communications protocol can transmit.

TS-109 uses standard Ethernet frames: **1500 bytes** by default. If your network appliances support Jumbo Frame setting, select the appropriate MTU value for your network environment. TS-109 supports 4074 and 7418 bytes for MTU.



Note: Jumbo Frame setting is valid in Gigabit network environment only. Besides, all network appliances connected must enable Jumbo Frame and use the same MTU value.

Jumbo Frame Setting (MTU)

- Jumbo frame will only work in Gigabit network environment. Please make sure your clients are configured to use the same frame size.
- Jumbo frame setting will work only when all network appliances connected have enabled jumbo frame and use the same MTU value.

Select Jumbo Frame setting:

Disable Jumbo Frame, MTU value is 1500 bytes	▼
Disable Jumbo Frame, MTU value is 1500 bytes	
Enable Jumbo Frame, MTU value is 4074 bytes	
Enable Jumbo Frame, MTU value is 7418 bytes	

3.4.2 Microsoft Networking

- Microsoft Networking

☒ Enable file service for Microsoft networking

☒ Standalone Server

☐ AD Domain Member

Server Description:

Workgroup:

AD Server Name:

Domain Name:

Domain Username:

Password:

☐ Enable WINS server

☐ Use the specified WINS server

WINS server IP address:

☐ Domain Master

Enable file service for Microsoft networking: If you are using Microsoft® Windows®, enable this service to access the files on network share folders. Assign a workgroup name.

✓ **Standalone Server**

Use local users for user authentication.

✓ **AD Domain Member**

TS-109 supports Windows 2003 AD (Active Directory) to provide quick and direct import of user accounts to the existing AD server available in your network. This function helps you to save time and effort on creating user accounts and passwords and lowers IT maintenance cost by automatic configuration procedure.

➤ **Server Description**

Describe TS-109 for users to identify the server. To use TS-109 on the Microsoft Windows OS, you must enable Microsoft Network Services.

➤ **Workgroup**

Specify the workgroup TS-109 belongs to. The workgroup is a computer group unit in Microsoft Windows network for network sharing.

➤ **AD Server Name**

Enter the name of the AD server when AD domain is selected for authentication.

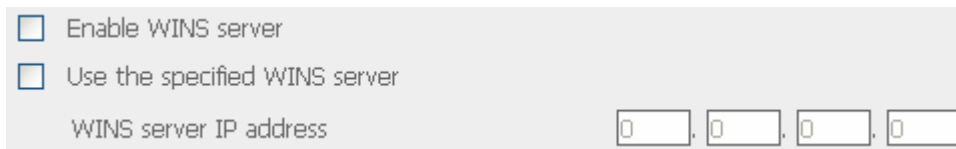
➤ **Domain Name**

The name of Microsoft domain. When you select AD domain, you must enter the domain name, the login user name, and the password.

Please refer to Chapter 11 for the information of AD authentication.

✓ **WINS server**

If the local network has a WINS server installed, specify the IP address. TS-109 will automatically register its name and IP address with WINS service. If you have a WINS server in your network and want to use this server, enter the WINS server IP.



The screenshot shows a configuration window with two checkboxes: "Enable WINS server" and "Use the specified WINS server". Below these is a label "WINS server IP address" followed by four input boxes for the IP address, separated by dots.

✓ **Domain Master**

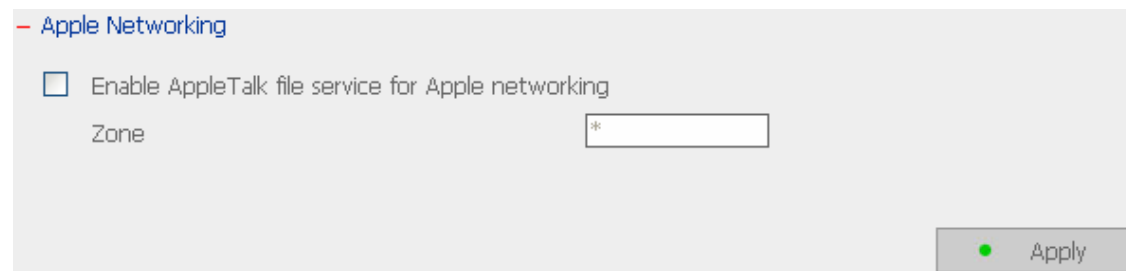
There is a unique Domain Master Browser for collecting and recording resources and services available for each PC in the network or workgroup of Windows.

When you find the waiting time for accessing Network Neighborhood too long, it may be caused by failure of an existing master browser, or there is no master browser in the network. If there is no master browser in your network, you can check the box Domain Master in this section to configure TS-109 as the master browser to enhance the speed of accessing information on Network Neighborhood.

3.4.3 Apple Network

To use TS-109 on Apple Mac operating system, enable AppleTalk network support.

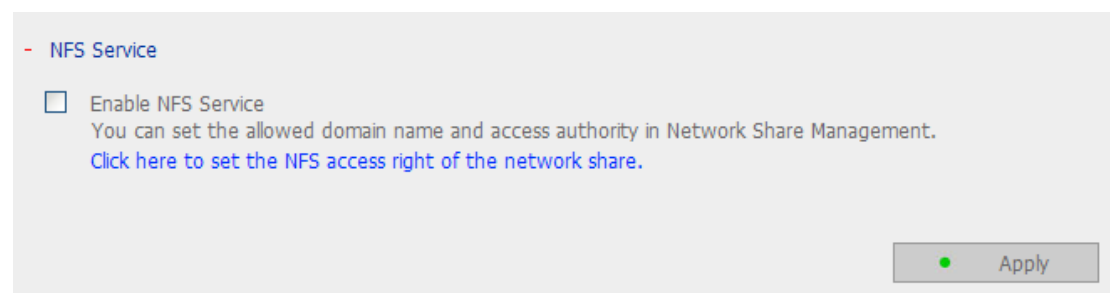
If your AppleTalk network uses extended networks, and is assigned with multiple zones, assign a zone name to TS-109. If you do not want to assign a network zone, enter an asterisk (*) to use the default setting. **This setting is disabled by default.**



The screenshot shows a configuration window titled "Apple Networking". It contains a checkbox labeled "Enable AppleTalk file service for Apple networking". Below this checkbox is a label "Zone" followed by a text input field containing an asterisk (*). In the bottom right corner, there is a green status indicator and an "Apply" button.

3.4.4 NFS Service

After enabling this service, you can click here to set up the Network access authority to configure the settings. For detailed configuration, please refer to Chapter 3.7.5. For the information of connecting to TS-109 via NFS on Linux, please refer to Chapter 12.

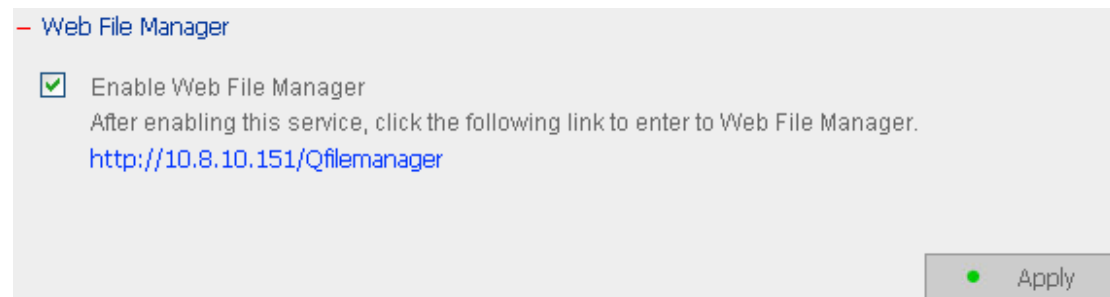


The screenshot shows a configuration window titled "NFS Service". It contains a checkbox labeled "Enable NFS Service". Below this checkbox, there is explanatory text: "You can set the allowed domain name and access authority in Network Share Management." and a blue hyperlink: "Click here to set the NFS access right of the network share." In the bottom right corner, there is a green status indicator and an "Apply" button.

3.4.5 Web File Manager

To access files on TS-109 via web browser, enable Web File Manager. If TS-109 is connected to the Internet and uses a valid IP address, you can access files on the server by web browser from anywhere. For more information, please refer to Chapter 9.

TS-109 supports SSL secure login. You can select SSL login on TS-109 administration page and login Web File Manager via https; or enter https://TS-109 IP:443/Qfilemanager/ in the browser.



The screenshot shows a configuration window titled "Web File Manager". It contains a checked checkbox labeled "Enable Web File Manager". Below this, a text instruction reads: "After enabling this service, click the following link to enter to Web File Manager." followed by a blue hyperlink: <http://10.8.10.151/Qfilemanager>. In the bottom right corner, there is a button with a green dot icon and the text "Apply".

3.4.6 FTP Service

When you enable FTP service, you can define the port number for the service and maximum number of users connected to the FTP at the same time.

✓ **Select Protocol Type**

Select to use standard FTP connection or SSL/TLS encrypted FTP. Select the corresponding protocol type in your client FTP software to ensure successful connection.

✓ **Unicode Support**

Select to enable or disable Unicode Support. The default setting is No. Since most FTP clients do not support Unicode currently, it is recommended that you disable Unicode support here and select the language the same as your OS in "System Settings—Encoding Setting" page so that the folders and files on FTP can be properly shown (please refer to Chapter 3.3.3). If your FTP client supports Unicode, make sure you have enabled Unicode support for both your client and TS-109.

- FTP Service

☒ Enable FTP Service

Protocol type: ☐ FTP (standard) ☒ FTP with SSL/TLS (Explicit)

Port Number: 21

Unicode Support: ☐ Yes ☒ No

Enable Anonymous: ☒ Yes ☐ No

Passive FTP Port Range: ☐ Use the default port range (55536 - 56559) ☒ Define port range: 1025 - 1025

Maximum number of all FTP connections: 30

Maximum number of connections for a single account: 10

☐ Enable FTP transfer limitation(0 means unlimited)

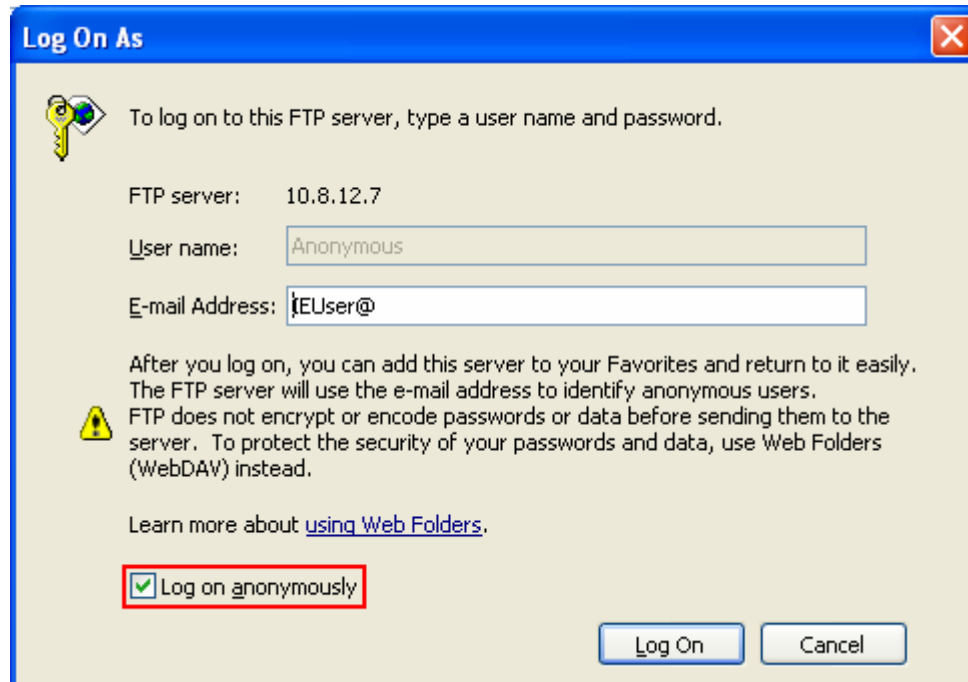
Single connection: Maximum download rate (KB/s): 0 KB/s * Maximum upload rate (KB/s): 0 KB/s

Note: If your FTP client does not support Unicode, please select "No" for Unicode Support and select a supported filename encoding from [\[Filename Encoding Setting\]](#) under [\[System Settings\]](#) so that the folders and files on FTP can be properly shown.

Apply

✓ **Unicode Support**

You can enable anonymous login to allow users to access the FTP server of TS-109 anonymously. The users can access the folders and files which are opened for public access. If this option is disabled, users must enter an authorized user name and password to access the server.



✓ **Passive FTP Port Range**

You can use the default port range (55536-56559) or define a port range larger than 1023. When using this function, please make sure you have opened the configured port range on your router or firewall.

✓ **FTP Transfer Limitation**

You can configure the maximum number of all FTP connections, maximum connections of a single account and the maximum upload/ download rates of a single connection.

3.4.7 Multimedia Station

To share multimedia files like photos, music or video files on the network, please enable Multimedia Station. For further information of Multimedia Station, iTunes service and UPnP Media Server, please refer to Chapter 5.

- Multimedia Station

☒ Enable Multimedia Station

After enabling this service, click the following link to enter Multimedia Station.
<http://10.8.12.9:8080/Qmultimedia/>

☐ Enable iTunes service

Label encoding

Chinese-Traditional ▼

Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages.

☐ Enable UPnP MediaServer

☐ After enabling this service, click the following link to enter UPnP MediaServer configuration page.
<http://10.8.12.9:9000/>

● Apply

3.4.8 Download Station

TS-109 supports BT, HTTP and FTP download independent of PC/notebook. To use download function of TS-109, please enable Download Station. For further information, please refer to Chapter 6.

- Download Station

☒ Enable Download Station
After enabling this service, click the following link to enter to Download Station.
<http://10.8.10.151/QDownload>

● Apply



Warning: Please be warned against illegal downloading of copyrighted materials. The Download Station functionality is provided for downloading authorized files only. Downloading or distribution of unauthorized materials may result in severe civil and criminal penalty. Users are subject to the restrictions of the copyright laws and should accept all the consequences.

3.4.9 Web Server

You can publish your own server by enabling Web Server function of TS-109. Enter the port number for web server service, the default number is 80. For further information, please refer to Chapter 7.

Configure register_globals

Select to enable or disable register_globals. The setting is disabled by default. When the web program asks to enable php register_globals, please enable this option. However, for system security concerns, it is recommended to disable this option.

SMTP Server

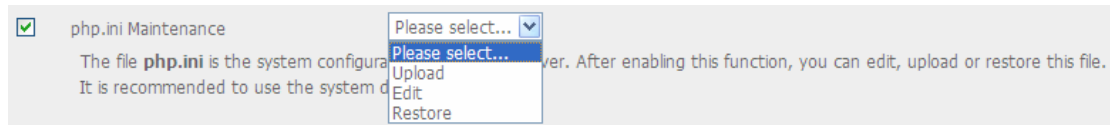
With the correct SMTP server settings, you will be able to use the PHP mail () delivery function immediately.

The SMTP server can be represented as an IP address or a domain name. If you have entered a web domain name for the SMTP server instead of an IP address, please check that you have provided the correct DNS server location in Network Settings > TCP/IP Settings.

Enable SMTP Authentication: If your SMTP server requires verification, please

check this option.

php.ini Maintenance



☒ php.ini Maintenance

The file **php.ini** is the system configuration file. It is recommended to use the system default file. After enabling this function, you can edit, upload or restore this file.

Please select...
Please select...
Upload
Edit
Restore

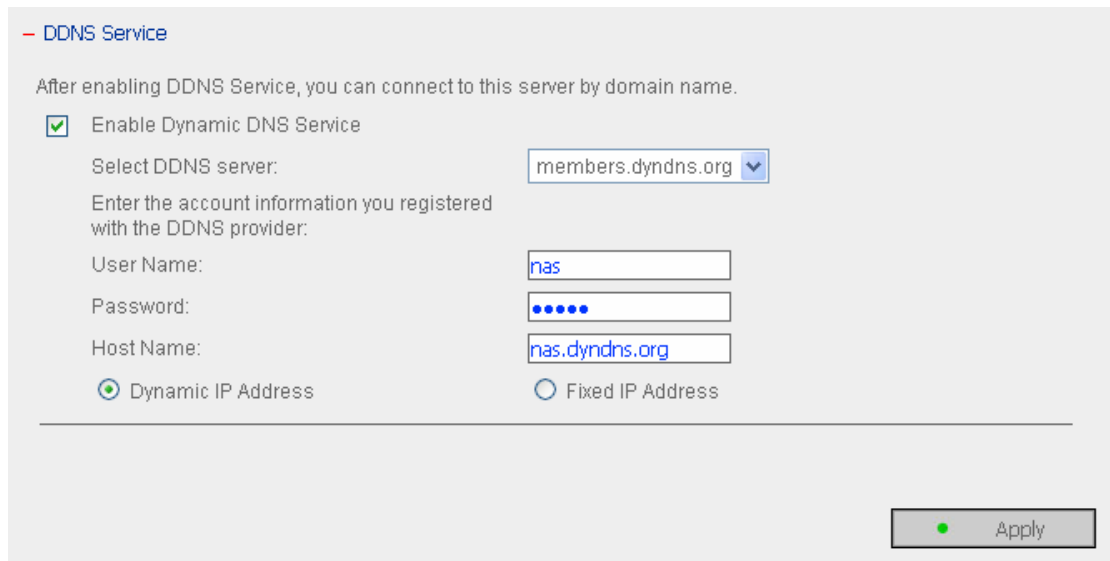
Check the box "php.ini Maintenance" to select to upload, edit or restore php.ini.

Edit: Edit the current php.ini file.

Upload: Upload a new php.ini file to replace the current file.

Restore: Restore the php.ini file to system default.

3.4.10 DDNS Service



— DDNS Service

After enabling DDNS Service, you can connect to this server by domain name.

☒ Enable Dynamic DNS Service

Select DDNS server: members.dyndns.org ▼

Enter the account information you registered with the DDNS provider:

User Name: nas

Password: ●●●●●

Host Name: nas.dyndns.org

☒ Dynamic IP Address ☐ Fixed IP Address

Apply

To set up a server on the Internet and enable users to access it easily, a fixed and easy-to-remember host name is often required. However, if ISP provides only dynamic IP address, the IP address of the server will change from time to time and is difficult to recall. You can enable DDNS service to solve the problem.

After enabling DDNS service of TS-109, whenever TS-109 restarts or the IP address is changed, TS-109 will notify the DDNS provider immediately to record the new IP address. When the user tries to connect TS-109 via the host name, DDNS will transfer the recorded IP address to the user.

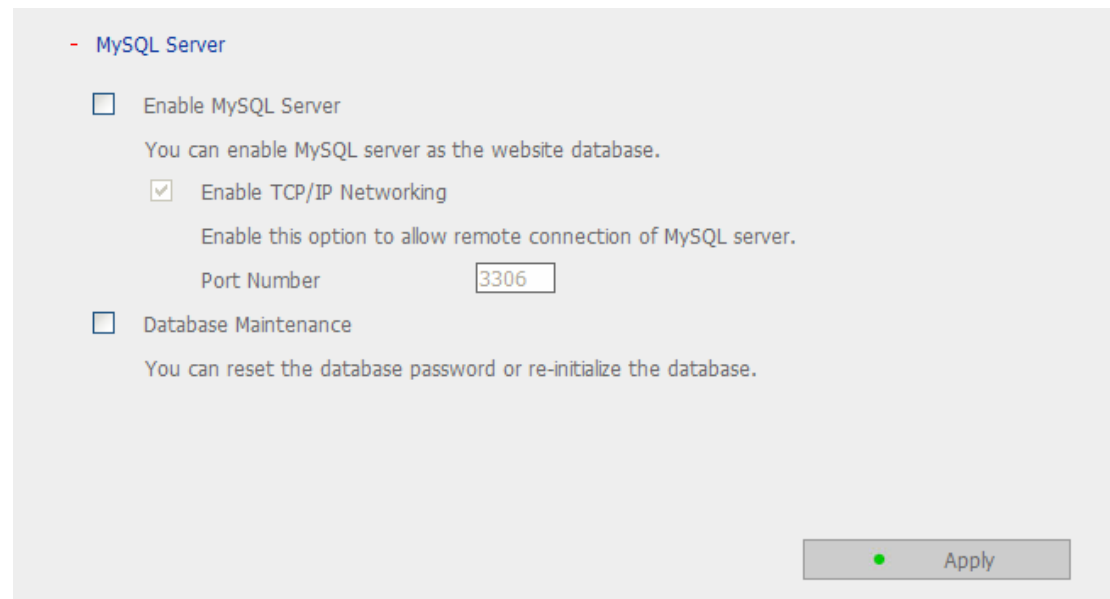
Enable and configure DDNS of TS-109:

Before using DDNS service, please register a host name from DDNS provider*. TS-109 supports the 5 DDNS providers: members.dyndns.org, update.ods.org, members.dhs.org, www.dyns.cx, www.3322.org.

Enable Dynamic DNS Service, and select DDNS server. Then enter the user name, password, and hostname.

* For the information of DDNS service registration, please refer to the website of the DDNS providers.

3.4.11 MySQL Server



- MySQL Server

☐ Enable MySQL Server
You can enable MySQL server as the website database.

☒ Enable TCP/IP Networking
Enable this option to allow remote connection of MySQL server.
Port Number

☐ Database Maintenance
You can reset the database password or re-initialize the database.

Apply

You can enable MySQL Server as the website database..

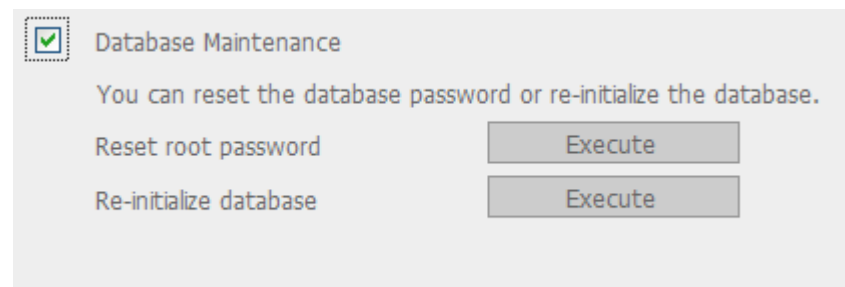
Enable remote connection of MySQL Server

You can enable this option to configure your Turbo Station's MySQL Server as a database server of another web server in remote site through Internet connection. When you disable this option, your MySQL Server will only be configured as local database server for Turbo Station's web server.

After enabling remote connection, please assign a port for the remote connection service of MySQL server. The default port is 3306.

Database Maintenance

Click **Database Maintenance** to reset the database password or initialize the database.



☒ Database Maintenance
You can reset the database password or re-initialize the database.

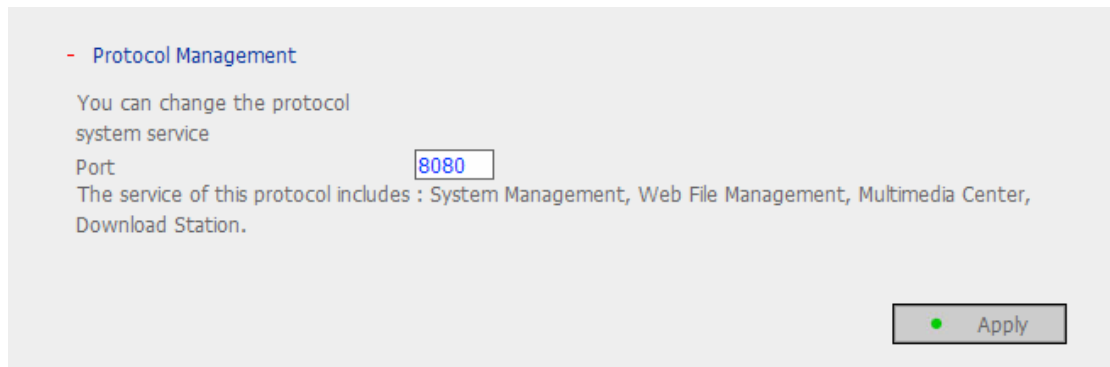
Reset root password

Re-initialize database

Reset root password: Execute this function to reset the password of MySQL root as "admin".

Re-initialize database: Execute this function to delete all the data on MySQL database.

3.4.12 Protocol Management


A screenshot of a web-based configuration window titled "Protocol Management". The window has a light gray background. At the top, there is a blue minus sign followed by the text "Protocol Management". Below this, the text "You can change the protocol system service" is displayed. Underneath, the label "Port" is followed by a text input field containing the value "8080". Below the input field, the text "The service of this protocol includes : System Management, Web File Management, Multimedia Center, Download Station." is shown. In the bottom right corner, there is a button with a green dot icon and the text "Apply".

- Protocol Management

You can change the protocol system service

Port

The service of this protocol includes : System Management, Web File Management, Multimedia Center, Download Station.

 Apply

Assign a protocol for the system management. The default port is 8080. The services of this protocol include: System Management, Web File Manager, Multimedia Station, and Download Station.

The system will restart after clicking **Apply**. Please wait. The website will automatically change to the homepage of the new protocol system.

3.4.13 View Network Settings

You can view current network settings and status of TS-109 in this section.

[View Network Settings](#)

Network		Network File Services
LAN Configuration		
Connection Type	DHCP	
IP Address	172.17.26.45	
Subnet Mask	255.255.254.0	
Default Gateway	172.17.26.1	
MAC Address	00:08:9B:8A:6B:10	
Connection Status	Ready	
Enable DHCP Server	No	

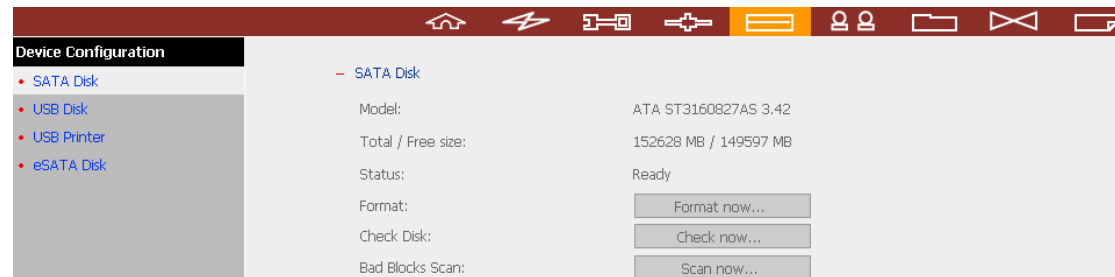
- View Network Settings

Network	Network File Services
Microsoft Networking	
Enabled	Yes
Server Type	Standalone Server
Workgroup	NAS
WINS server Enabled	No
Domain Master Enabled	No
Apple Networking	
Enabled	No
Apple Zone Name	*
Unix/Linux NFS	
Enabled	No
Web File Manager	
Enabled	Yes
FTP Service	
Enabled	Yes
Port Number	21
Max Connections	30
Multimedia Station	
Enable Multimedia Station	Yes
Enable iTunes service	Yes
Enable UPnP MediaServer	Yes
Download Station	
Enabled	Yes
Web Server	
Enabled	No
Port Number	80
register_globals	off
DDNS Service	
Enabled	No
MySQL Server	
Enabled	No
Enable TCP/IP Networking	Yes
Protocol Management	
Port Number	5000

- Close

3.5 Device Configuration

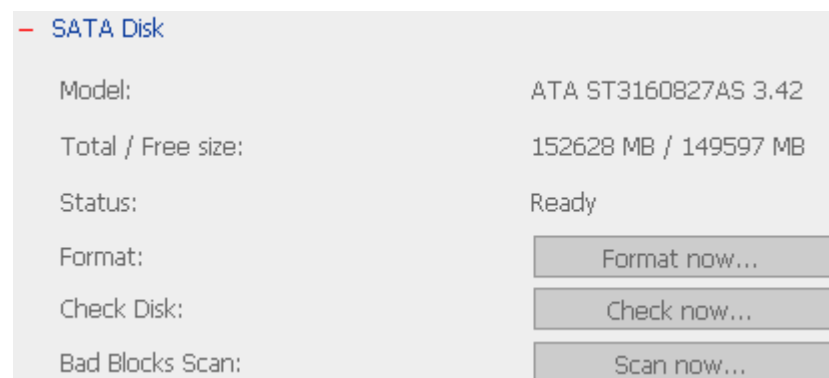
You can configure SATA disk, USB disk, USB printer and external SATA (eSATA) disk in this section.



3.5.1 SATA Disk

This page shows the model, size and current status of the SATA disk on TS-109. You can format and check disk, and scan bad blocks on the disk. When the SATA disk is formatted, TS-109 will create the following default share folders:

- ✓ **Public:** Network share for file sharing
- ✓ **Qdownload:** Network share for Download Station
- ✓ **Qmultimedia:** Network share for Multimedia Station
- ✓ **Qusb:** Network share for data copy function via USB ports
- ✓ **Qweb:** Network share for Web Server



3.5.2 USB Disk

TS-109 supports USB disks and thumb drives for extended storage and Q-RAID 1 function. You can select one of the following settings for the disk:

- Data Sharing:** Select this option to use the selected USB disk as a network share of TS-109.
- Q-RAID 1:** Select this option to configure the selected USB disk with the SATA disk in TS-109 as Q-RAID 1 configuration.

When backup is executed once, data can be automatically backed up by connecting the external disk to TS-109 directly. There is no need to configure the settings in administration interface. Manual operation is required for the first time backup to enhance secure data protection.



Note: Only one disk can be set as Q-RAID 1 at one time.

USB Disk

USB Disk 1

Manufacturer:

Model:

Device Type:

Total / Free size:

File System:

Status:

Format As:

Eject:

WDC WD40

WD-WXE40646

USB 2.0

38154 MB / 38144 MB

FAT

Ready

FAT

Format now...

Eject now...

To remove the hardware device, please click [Eject now...]. When the system does not show the device anymore, you can remove it safely.

Note: Do NOT unplug the device when it is in use to protect the device.

Disk Usage Setting:

☒ Data Sharing

☐ Q-RAID 1

Apply

Recover data from USB disk when the SATA disk of TS-109 fails:

When the SATA disk of TS-109 fails, you can recover data from a backup disk if the disks have been previously configured as Q-RAID 1. Please follow the steps below to recover data from a backup USB disk to TS-109.

1. Replace the failed SATA disk with a new one.
2. Format the new disk by clicking **Format now** in Device Configuration-SATA Disk page.
3. Connect a USB disk to TS-109.
4. Go to Device Configuration-USB Disk page. Click the **Recover Data** button* under Disk Usage Setting. All data on the USB disk will be recovered to the new SATA disk.



Warning: After executing this function, all data different from the USB disk will be removed from the SATA disk of TS-109.

*This button will appear when the following conditions are all met:

- a. The usage of the plugged in USB disk has been configured as Q-RAID 1.
- b. The SATA disk in TS-109 has been changed or the plugged in USB disk has been configured as Q-RAID 1 in other servers.
- c. No Q-RAID1 disk is currently running on TS-109.

USB Disk

USB Disk 1

Manufacturer: Maxtor 6
Model: E040L0
Device Type: USB 2.0
Total / Free size: 39205 MB / 37697 MB
File System: EXT 3
Status: Ready
Format As: EXT 3
Eject: Format now... Eject now...

To remove the hardware device, please click [Eject Now...]. When the system does not show the device anymore, you can remove it safely.
Note: Do NOT unplug the device when it is in use to protect the device.

Disk Usage Setting:
☐ Data Sharing
☒ Q-RAID 1
Recover Data

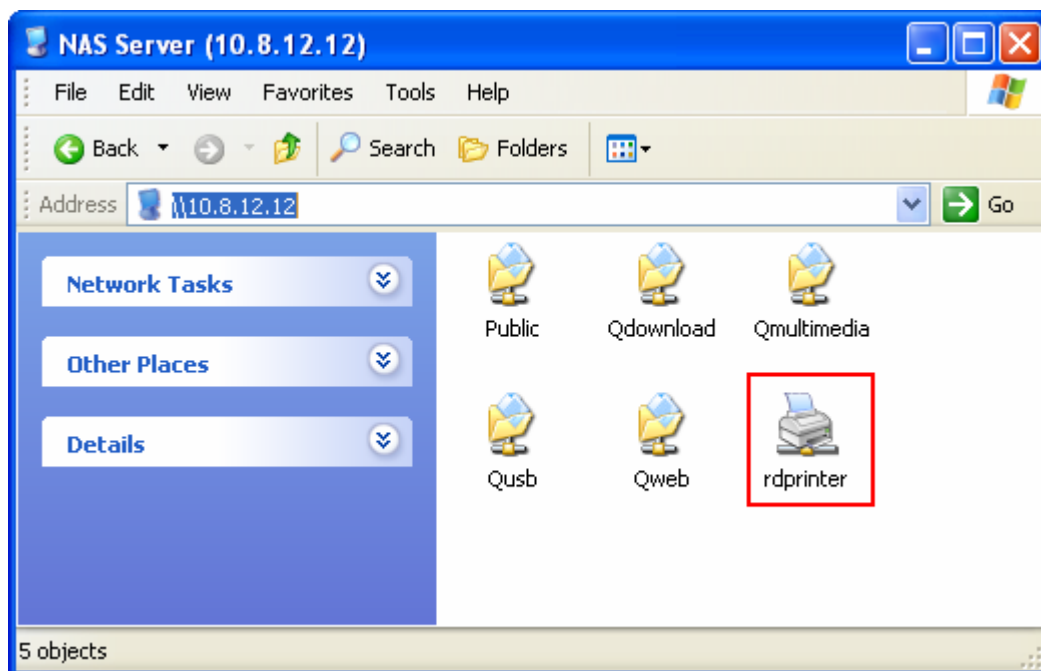
☒ Apply

3.5.3 USB Printer

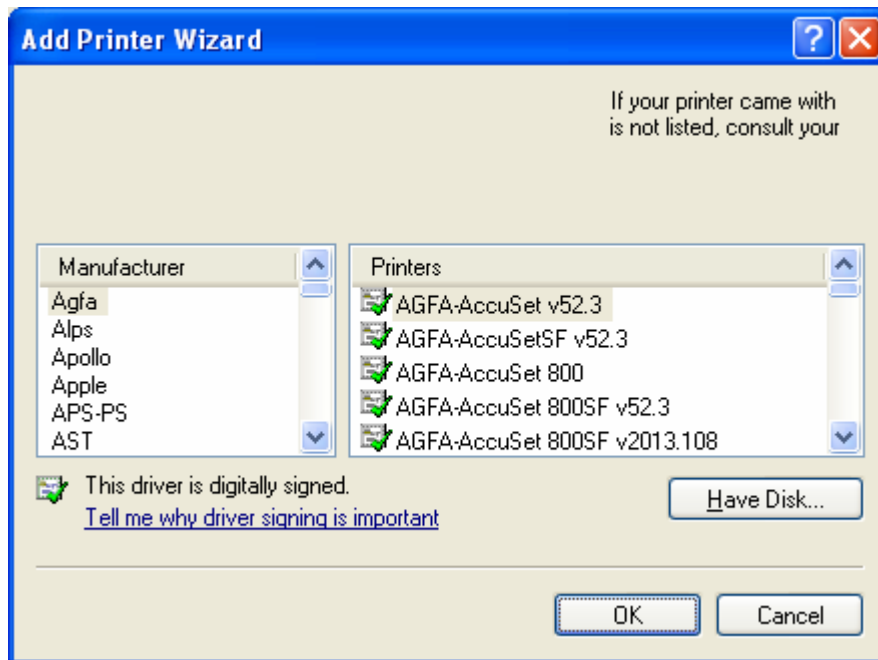
1. To provide printer sharing function for network users, you can simply connect a USB printer to the USB port of TS-109. TS-109 will detect the printer automatically.



2. A printer icon should be shown in the share folder of the server. Double click the icon.



3. Install the printer driver.



4. When finished, you can start to use network printer service of TS-109.



Note:

1. TS-109 supports general USB printer only but not multifunction printer.
2. TS-109 printer service is only supported in Windows OS but not Mac OS.
3. For the information of supported USB printer models, please visit <http://www.qnap.com>.

3.5.4 eSATA Disk

TS-109 supports eSATA disk for extended storage and Q-RAID 1 function. You can connect an eSATA disk to the eSATA port of TS-109. You can select one of the following two settings for the disk:

- a. **Data Sharing:** Select this option to use the selected eSATA disk as a network share of TS-109.
- b. **Q-RAID 1:** Select this option to configure the selected eSATA disk with the SATA disk in TS-109 as Q-RAID1 configuration.

When backup is executed once, data can be automatically backed up by connecting the external disk to TS-109 directly. There is no need to configure the settings in administration interface. Manual operation is required for the first time backup to enhance secure data protection.



Note: Only one disk can be set as Q-RAID 1 at one time.

eSATA Disk 1

Manufacturer:

ATA

Model:

ST3160827AS

Total / Free size:

152627 MB / 133551 MB

File System:

EXT 3

Status:

Ready

Format As:

EXT 3

Format now...

Eject:

Eject now...

To remove the hardware device, please click [Eject now...]. When the system does not show the device anymore, you can remove it safely.

Note: Do NOT unplug the device when it is in use to protect the device.

Disk Usage Setting:

☐ Data Sharing

☒ Q-RAID 1

Apply

Recover data from eSATA disk when the SATA disk of TS-109 fails:

When the SATA disk of TS-109 fails, you can recover data from a backup disk if the disks have been previously configured as Q-RAID 1. Please follow the steps below to recover data from a backup eSATA disk to TS-109.

1. Replace the failed SATA disk with a new one.
2. Format the new disk by clicking **Format now** in Device Configuration-SATA Disk page.
3. Connect an eSATA disk to TS-109.
4. Go to Device Configuration- eSATA Disk page. Click the **Recover Data** button* under Disk Usage Setting. All data on the eSATA disk will be recovered to the new SATA disk.



Warning: After executing this function, all data different from the eSATA disk will be removed from the SATA disk of TS-109.

*This button will appear when the following conditions are all met:

- a. The usage of the plugged in USB disk has been configured as Q-RAID 1.
- b. The SATA disk in TS-109 has been changed or the plugged in USB disk has been configured as Q-RAID 1 in other servers.
- c. No Q-RAID1 disk is currently running on TS-109.

eSATA Disk

eSATA Disk 1

Manufacturer: Maxtor 6
Model: E040L0
Total / Free size: 39205 MB / 37697 MB
File System: EXT 3
Status: Ready
Format As: EXT 3
Eject: [Format now...] [Eject now...]

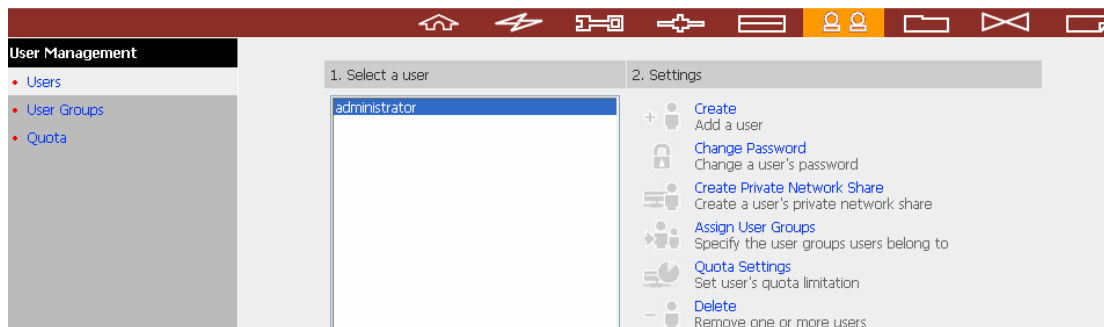
To remove the hardware device, please click [Eject Now...]. When the system does not show the device anymore, you can remove it safely.
Note: Do NOT unplug the device when it is in use to protect the device.

Disk Usage Setting:
☐ Data Sharing
☒ Q-RAID 1
Recover Data

[Apply]

3.6 User Management

The files on TS-109 can be shared among multiple users. For easier management and better control of users' access right, you have to organize users, user groups and their access right control.



3.6.1 Users

The system has created the following users by default:

① Administrator

By default, administrator has access to system administration and cannot be deleted.

② Guest

This is a built-in user and will not be displayed on User Management page. When you use a non-registered user name to login, the server will recognize the user as a guest and will allow limited access. A guest does not belong to any user group. The login password for guest is **guest**.

③ Anonymous

This is a built-in user and will not be displayed on User Management page. When you connect to the server by FTP service, you can use this name to login as a guest.

256 users can be created at maximum (including system default users). You can create a new user according to your needs. The following information is required to create a new user:

✓ **User name**

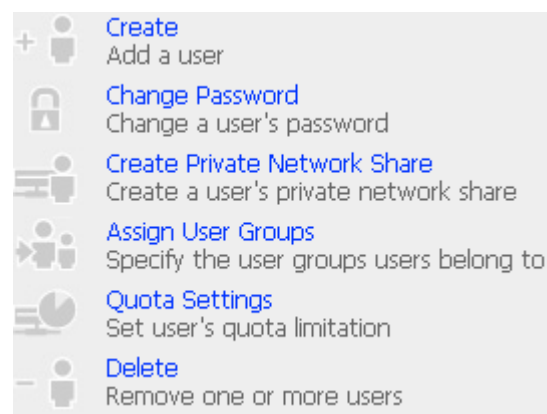
The user name must not exceed 32 characters. It is case-insensitive and supports double-byte characters, such as Chinese, Japanese, and Korean except:

" / \ [] : ; | = , + * ? < > ` ' .

✓ **Password**

The password is case-sensitive and can be 16 characters long at maximum. It is recommended to use a password of at least 6 characters.

You can perform the following settings for users:



3.6.2 User Groups

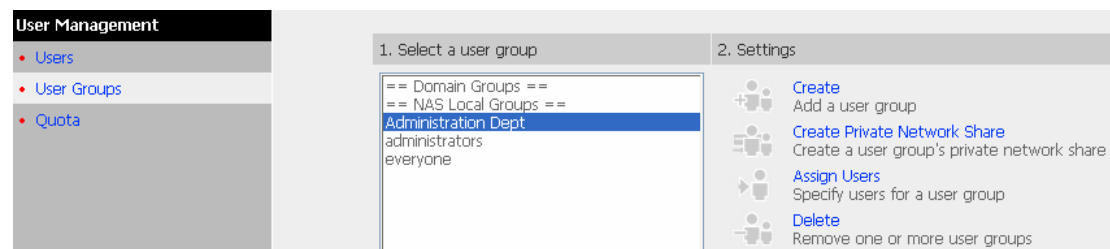
User group is a collection of users with the same access right to files or folders. TS-109 has created the following user groups by default:

① Administrators

All members in this group have administration right. You cannot delete this group.

② Everyone

All registered users belong to everyone group. You cannot delete this group.



You can manage user groups with the following options:



128 groups can be created at maximum. A group name must not exceed 256 characters. It is case-insensitive and supports double-byte characters, such as Chinese, Japanese, and Korean, except the following ones:

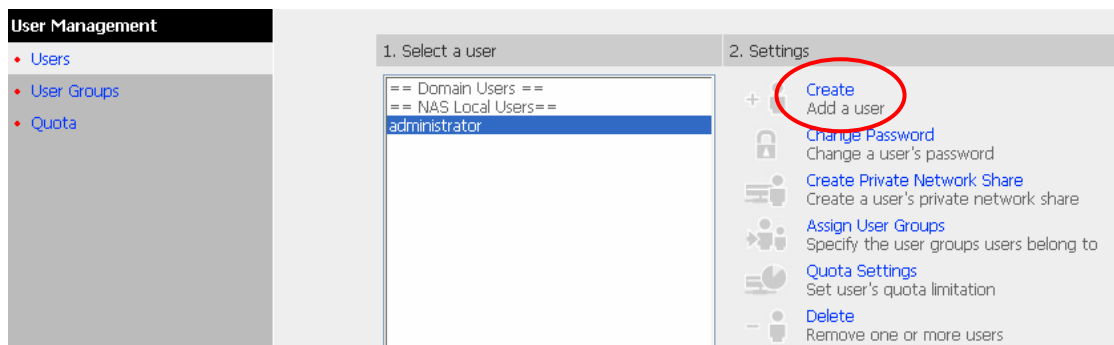
" / \ [] : ; | = , + * ? < > ` '

Create Users and Assign Users to User Group

The following example demonstrates how to create new users and assign users to a user group.

ABC Co. has recently recruited two employees Mr. Jones Lee for Administration Department and Ms. Jane Wu for Sales Department. The IT Department therefore needs to create two user accounts for them to access company data on TS-109.

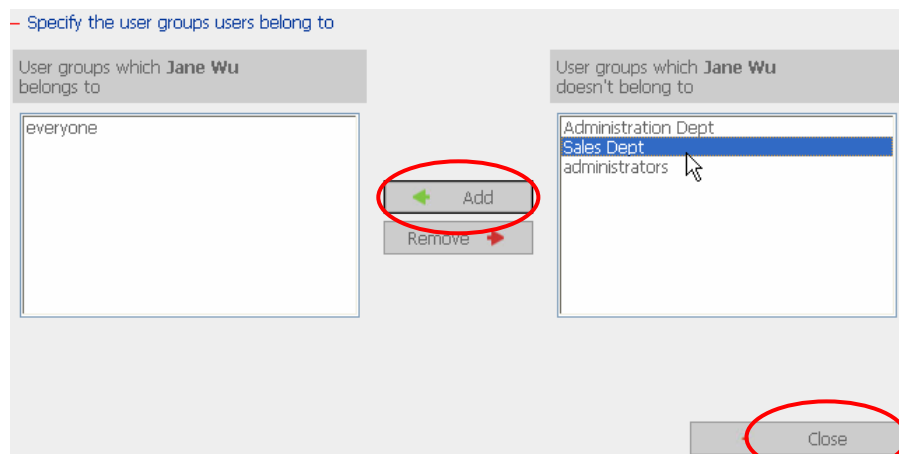
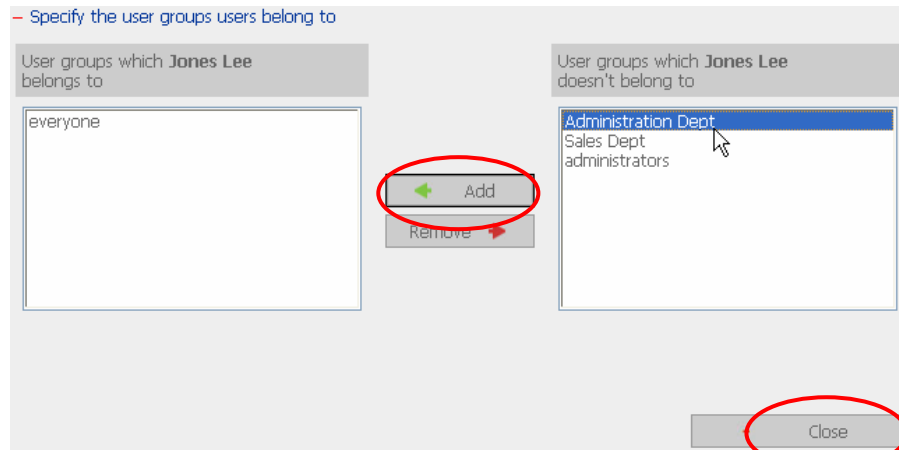
- i. To create a user account, go to User Management-Users. Click **Create**.



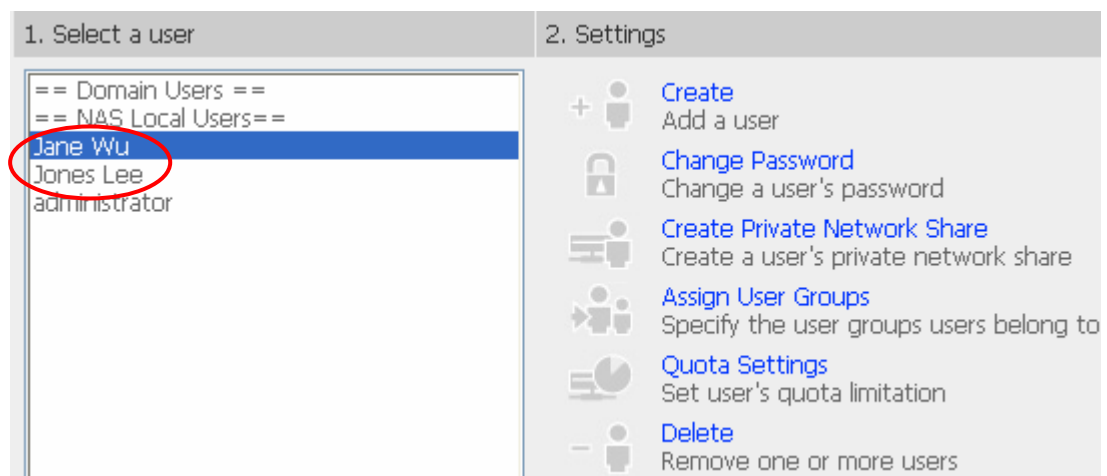
- ii. Enter the user name (Jones Lee/ Jane Wu) and password. Check the box "Continue to set the user groups to which this user belongs" and click **OK**.

The image contains two screenshots of the 'Add a user' form. The first screenshot shows the form with 'User Name' set to 'Jones Lee' and 'Password' and 'Verify Password' fields filled with dots. A note states: 'Note: For increased security, password should be at least 6 characters.' Below the note, the checkbox 'Continue to set the user groups to which this user belongs' is checked and circled in red. At the bottom, the 'OK' button is circled in red. The second screenshot is identical but with 'User Name' set to 'Jane Wu'.

- iii. Select the user groups the users belong to on the right list, i.e. Mr. Jones Lee for Administration Dept and Ms. Jane Wu for Sales Dept, and click **Add**. Then click **Close**.



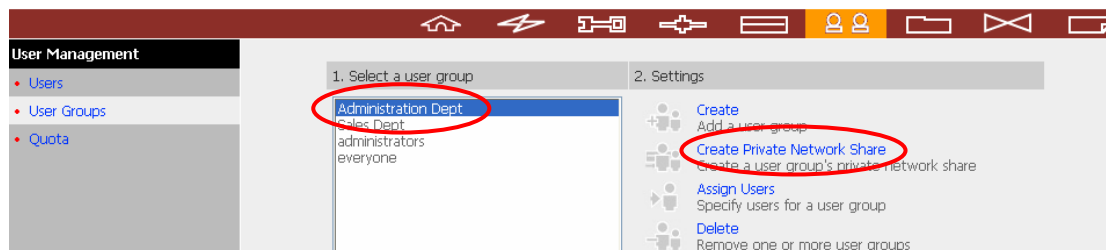
- iv. The user names will appear on the list on Create User Page.



Create Private Network Share for User Groups

You can create particular network share for each user group. The procedure is described as below:

1. To create a network share called **media** accessible by Administration Department only, please go to "User Management—User Groups" page. Select the user group Administration Dept and click **Create Private Network Share** on the right.

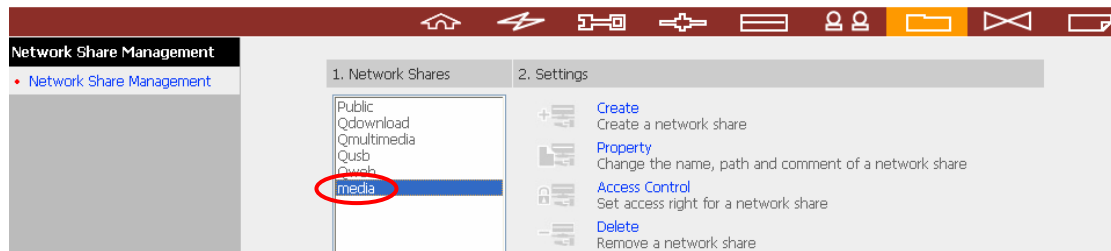


2. Enter the network share name **media**. Select the disk volume that the share will be created in and specify the path automatically or manually. Enter the comment for the network share, e.g. media folder for Admin Dept and click **Apply**.

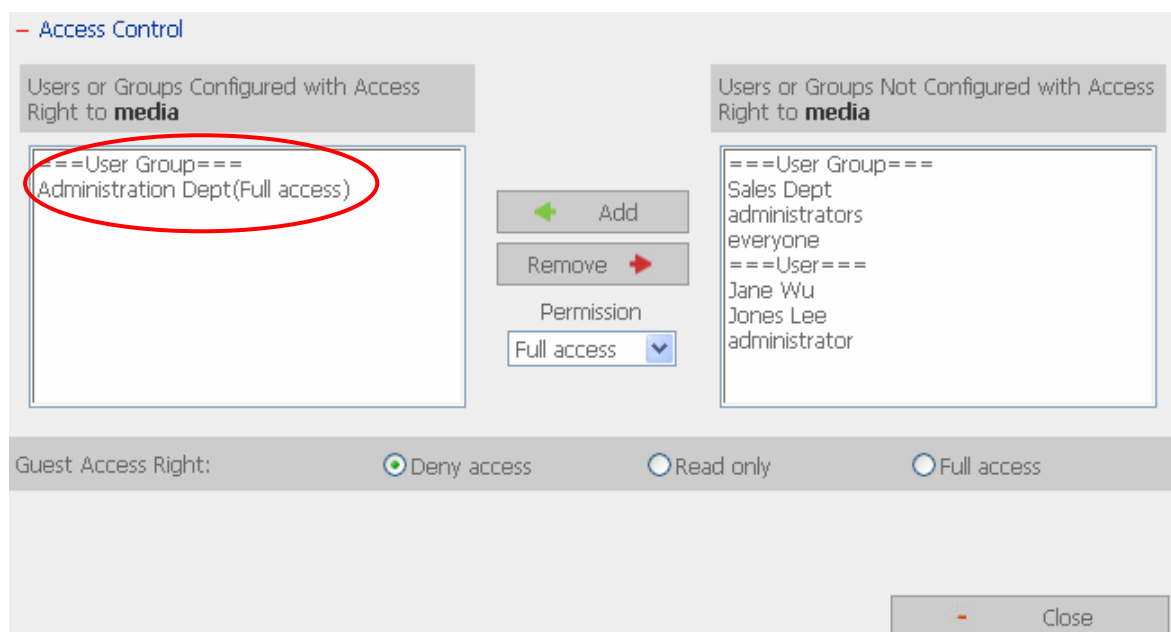
— Enter new network share's name, volume and path. Only users that are the members of Administration Dept user group can access this network share.

Network Share Name	<input type="text" value="media"/>
Path	<input checked="" type="radio"/> Specify path automatically <input type="radio"/> Enter path manually
	<input type="text"/> <input type="button" value="Browse..."/>
Comment	<input type="text" value="media folder for Admin Dept"/>

3. You can see the folder **media** in **Network Share Management** page.



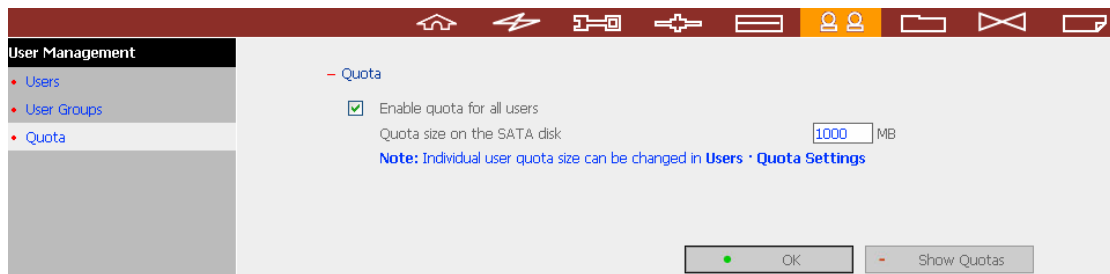
4. Enter Access Control. You can see that only Administration Dept has full access right to the folder.



3.6.3 Quota

To allocate disk volume efficiently, you can specify the quota that can be used by each user. When this function is enabled and a user has reached his/her disk quota, he/she cannot upload data to the server anymore. By default, no limitations are set for users. You can modify the following two options:

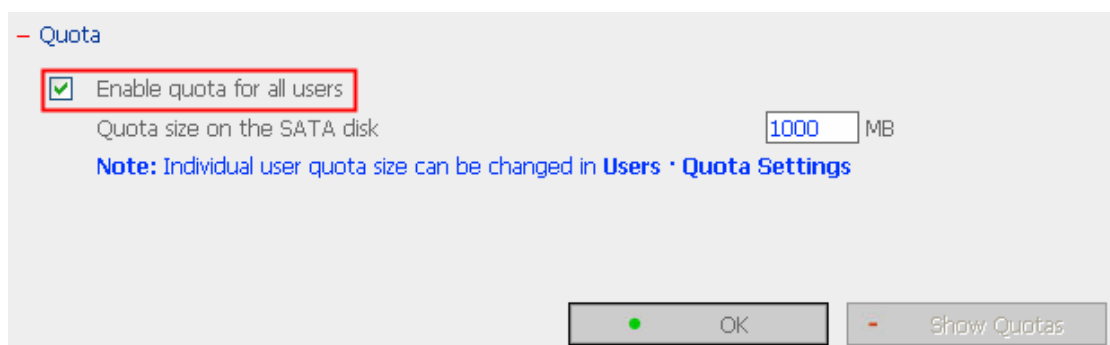
- i. Enable quota for all users
- ii. Quota size on each disk volume



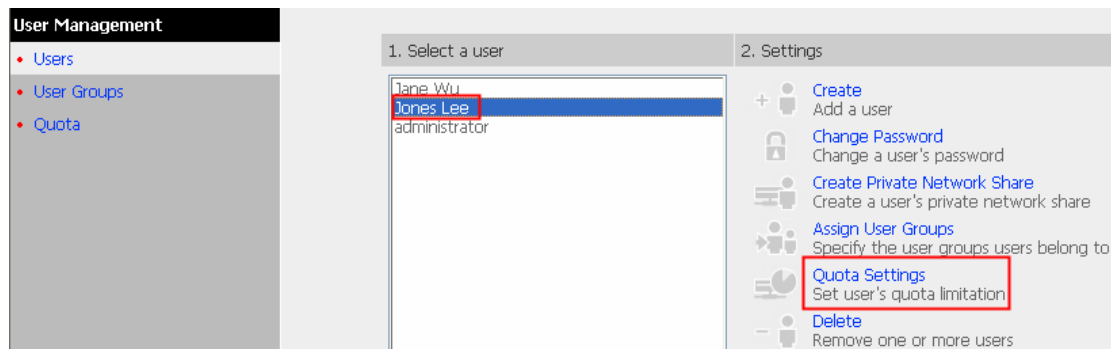
Please refer to the following example to configure the quota setting of users:

The IT department is planning to set the disk quota of Mr. Jones Lee from Administration Department and Ms. Jane Wu from Sales Department on TS-109. The disk quota is 2000MB for Mr. Jones Lee and 4000MB for Ms. Jane Wu.

1. Please go to **Quota** page in **User Management** to enable quota for all users. Enter the quota size on each disk volume, e.g. 1000MB. The quota for individual user can be modified later.



2. Select Jones Lee on User page and click **Quota Settings** on the right.



3. Enter the quota size 2000MB and click **OK**.

— Quota status for user **Jones Lee**

Volume	Quota Size	Used Size	Status
Single Disk: Drive (Free Size: 149190.00 MB)	1000 MB	0.00 MB	Available 1000.00 MB

Set the quota size of **Jones Lee** on the SATA disk

☐ No limit ☒ Quota size: MB

4. Follow the same steps and enter the quota size 4000MB for Jane Wu and click **OK**. The quota setting is successfully applied.

— Quota status for user **Jane Wu**

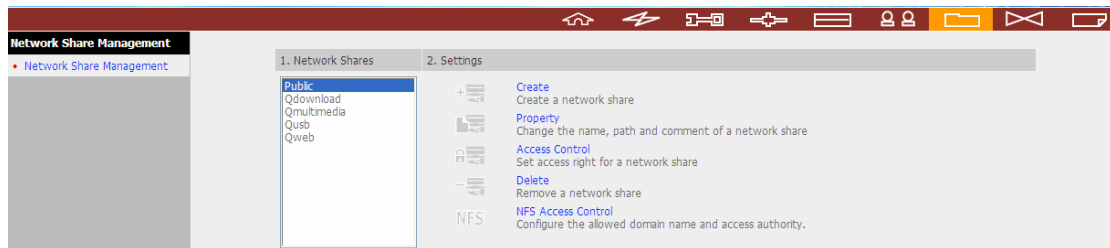
Volume	Quota Size	Used Size	Status
Single Disk: Drive (Free Size: 149190.00 MB)	1000 MB	0.00 MB	Available 1000.00 MB

Set the quota size of **Jane Wu** on the SATA disk

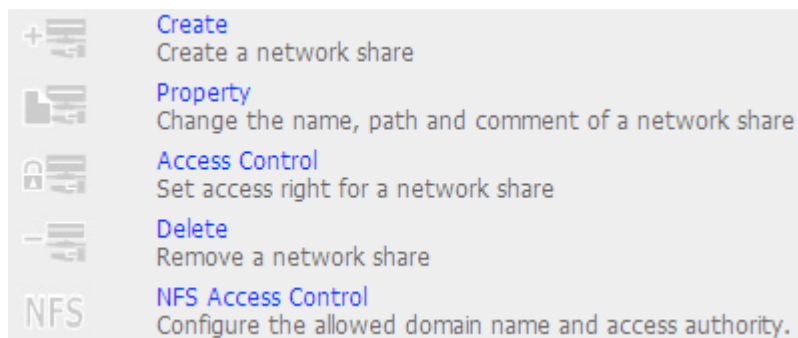
☐ No limit ☒ Quota size: MB

3.7 Network Share Management

The primary purpose of network storage is file sharing. You can create different network share folders for various types of files, and provide different file access rights to users or user groups.



The following options are supported in Network Share Management:



3.7.1 Create

To create a network share, enter the following information:

- ✓ Network share name
The share name can be 32 characters long at maximum and cannot contain the following characters:
" . + = / \ : | * ? < > ; [] %
- ✓ Disk volume
This area shows the disk volume status.
- ✓ Path
All data is stored under the assigned path onto the disk volume. You can select "Specify path automatically" or assign a path manually. The path cannot exceed 256 characters and cannot contain the characters below:
" . + = / \ : | * ? < > ; [] %
- ✓ Comment
Enter a brief description for the share folder. The comment cannot exceed 128 characters.

The screenshot shows a 'Create' dialog box for setting up a network share. It includes fields for 'Network Share Name', 'Path' (with radio buttons for 'Specify path automatically' and 'Enter path manually'), and a 'Comment'. A 'Browse...' button is next to the path field. At the bottom, there are three checkboxes: 'Grant full access right for everyone' (checked), 'Grant read access right for guest' (unchecked), and 'Continue to set access right for this network share' (checked). 'OK' and 'Cancel' buttons are at the bottom right.

– Create

Network Share Name

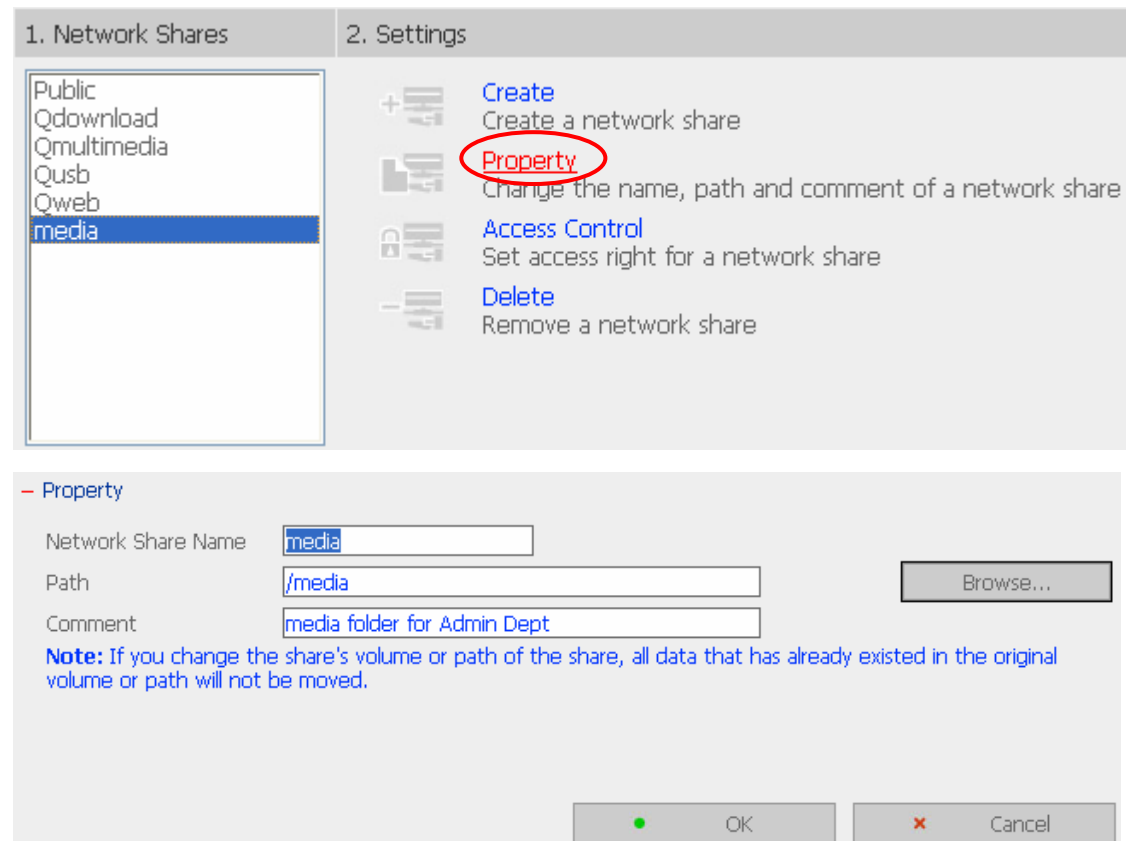
Path ☒ Specify path automatically
☐ Enter path manually

Comment

☒ Grant full access right for everyone
☐ Grant read access right for guest
☒ Continue to set access right for this network share

3.7.2 Property

To edit the property of an existing network share, select a share and click **Property**. You can then edit the content of that share.



3.7.3 Access Control

When a network share is created, you can assign access rights to users or user groups:

- ✓ Deny access
Access to the network share will be denied.
- ✓ Read only
Users can read the files only on the network share.
- ✓ Full access
Users can read, write, create, or delete files and folders on the network share.

The dialog box is titled "Access Control" and is used to manage permissions for the network share "media". It is divided into two main sections:

- Users or Groups Configured with Access Right to media:** This section contains a list of users and groups with their assigned permissions. In this example, "Administration Dept" is listed with "Full access".
- Users or Groups Not Configured with Access Right to media:** This section contains a list of users and groups that have not been assigned permissions. In this example, "Sales Dept", "administrators", "everyone", "Jane Wu", "Jones Lee", and "administrator" are listed.

Between these two sections are three buttons: "Add" (with a green left arrow), "Remove" (with a red right arrow), and a "Permission" dropdown menu currently set to "Full access".

At the bottom, there is a "Guest Access Right:" section with three radio buttons: "Deny access" (selected), "Read only", and "Full access".

A "Close" button is located in the bottom right corner.

3.7.4 Delete

Select a share and click **Delete**. Click **OK** to confirm.

This is a confirmation dialog box for deleting the network share "media". It has a grey header bar with the text: "Please make sure you want to delete network share **media**." Below this is a white box with a blue note: "Note: All active users who are currently using this network share will be disconnected." At the bottom, there are two buttons: "OK" (with a green dot icon) and "Cancel" (with a red X icon).

3.7.5 NFS Access Control

You can set the NFS access right of the network share. The Public folder is for open access while access is denied for other default network shares. For detailed configuration, please click on the link “Click here for more detailed description”.

NFS Access Control

You can set the NFS access right of the network share.

Network Share Name

Public

Access right

No limit

Allowed IP address or domain name:

Note: Please make sure the format you enter is correct. An incorrect format can lead to access error.

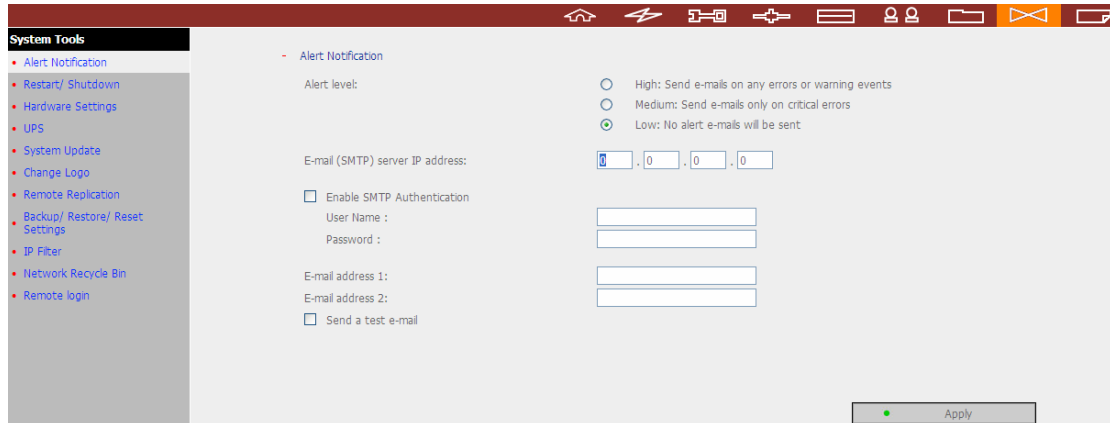
The allowed IP address or domain name can be a complete IP address or a domain name searchable by DNS. The IP addresses and domain names can be separated by comma (,). Wildcard characters “*” and “?” are supported for domain names, e.g. *.yourdomain.com. For further details. [Click here for more detailed description.](#)

OK

Cancel

3.8 System Tools

System Tools enable you to optimize the maintenance and management of TS-109.



System Tools

- Alert Notification
- Restart/ Shutdown
- Hardware Settings
- UPS
- System Update
- Change Logo
- Remote Replication
- Backup/ Restore/ Reset Settings
- IP Filter
- Network Recycle Bin
- Remote login

Alert Notification

Alert level:

☐ High: Send e-mails on any errors or warning events

☐ Medium: Send e-mails only on critical errors

☒ Low: No alert e-mails will be sent

E-mail (SMTP) server IP address: . 0 . 0 . 0

☐ Enable SMTP Authentication


User Name :

Password :

E-mail address 1:

E-mail address 2:

☐ Send a test e-mail

 Apply

3.8.1 Alert Notification

Enter the e-mail address of the administrator and the IP address of the SMTP server. In case of warning or malfunction, e.g. CPU fan fails, a drive fails or is unplugged, an email will be sent to the administrator automatically. You can go to Event Logs (refer to Chapter 3.9) to check the details of all errors and warnings.

If your mailbox requires SMTP authentication, enter the user name and password.



Note: It is recommended to send a test e-mail to make sure you can receive the alert mails.

Alert Notification

Alert level:

☐ High: Send e-mails on any errors or warning events

☐ Medium: Send e-mails only on critical errors

☒ Low: No alert e-mails will be sent

E-mail (SMTP) server IP address: . . .

☐ Enable SMTP Authentication

User Name :

Password :

E-mail address 1:

E-mail address 2:

☐ Send a test e-mail

3.8.2 Restart/ Shutdown

Select to restart or shut down TS-109.

Restart / Shutdown

To restart the server, click Restart.

To shut down the server, click Shut Down.

3.8.3 Hardware Settings

You can enable or disable the hardware functions of TS-109.

Hardware Settings

- ☒ Enable configuration reset switch
- ☒ Enable hard disk standby mode (if no access within 30 minutes Power LED will glow in blue and Status LED will be off)
- ☒ Enable light signal alert when the free size of SATA disk is less than the value: 3072 MB
- ☒ Auto power on when power resumes after power loss

i. Enable configuration reset switch

You can press the reset button for 3 seconds to reset the administrator password and system settings to default. The IP Filter setting in System Tools will also be restored to "Allow all connections".



ii. Enable hard disk standby mode

When this function is enabled, hard disk will go to standby mode if there is no access within the specified period. The Power LED will glow in blue and the Status LED will be off in hard disk standby mode.

iii. Enable light signal alert when the free size of SATA disk is less than the value:

The Status LED indicator will blink red and green when this function is enabled and the free space of the SATA disk is less than the value. The range of the value is 1-51200 MB.

iv. Auto power on when power resumes after power loss

When this function is enabled, TS-109 will turn on automatically when power resumes after improper shutdown or power loss.

3.8.4 UPS

If your UPS device provides USB interface, you can enable UPS (uninterruptible power supply) support to protect your system from abnormal system shutdown caused by power outage. In case of utility power failure, the system will shut down automatically by probing the power status of the connected UPS unit.

UPS

☐ Enable UPS Support

The system will be shut down in minute(s) when the AC power status is abnormal.

UPS Model

IP Address of UPS . . .

UPS Model AC Power Status: -- Battery Power Status: --

After selecting the UPS model, click Test to make sure selection is correct.

✓ Enable UPS support

To activate the UPS support, you can select this option. You can set the shutdown timer to turn off the system automatically after the system detects the AC power is abnormal. In general, the UPS can keep supplying the power for the system for about 5~10 minutes, depending on the maximum load of the UPS and the number of the loads connected to it.

UPS Model

Select the UPS model from the list. If the UPS model you are using is not available on the list, please contact our technical support.

IP Address of UPS

If you have selected APC UPS with SNMP for UPS model, enter the IP address of the UPS.

UPS

☒ Enable UPS Support

The system will be shut down in minute(s) when the AC power status is abnormal.

UPS Model

IP Address of UPS . . .

UPS Model AC Power Status: --
Battery Power Status: --

After selecting the UPS model, click Test to make sure selection is correct.



Note: Before enabling this option, please make sure the UPS model you select here is identical as the one you use. Otherwise it may lead to server error and automatic shutdown.

When UPS support is not enabled, the **Test** button will not function.

3.8.5 System Update

System Update

Note: If the system is running properly, you do not need to update the firmware.

Current firmware version: 1.0.0 Build 0510T

Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:


Step 1: Download the release notes of the same version as the firmware from QNAP website <http://www.qnap.com/> Read the release notes carefully to make sure you need to update the firmware.

Step 2: Before updating system firmware, back up all disk data on the server to avoid any potential data loss during system update.

Step 3: Click the **[Browse...]** button to select the correct firmware image for system update. Click the **[Update System]** button to update the firmware.

Note: System update may take tens of seconds to several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.

Update System



Note: If the system is running properly, you do not need to update the firmware.

Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:

Step 1: Download the release notes of the same version as the firmware from QNAP website <http://www.qnap.com/>. Read the release notes carefully to make sure you need to upgrade the firmware.

Step 2: Before upgrading system firmware, back up all disk data on the server to avoid any potential data loss during system update.

Step 3: Click the **[Browse...]** button to select the correct firmware image for system update. Click **Update System** to update the firmware.

Note: System update may take tens of seconds to several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.

3.8.6 Change Logo

You can choose your own picture to display on the login page of TS-109. The size of the picture cannot exceed 20K bytes.


[Change Logo](#)


Please select an image from the **To be displayed** pull-down menu. Then click **[Apply]** to confirm the change.


To upload your own image, click **[Browse...]** to select the image. Then click **[Upload]** to upload the image.


To replace an image, select an appropriate image from the **To be replaced to** pull-down menu and click **[Apply]**.


Uploaded image:	<input type="text"/>	<input type="button" value="Browse..."/>	<input type="button" value="Upload"/>
To be replaced to:	<input type="text" value="Not replace"/>		<input type="button" value="Replace"/>
To be displayed:	<input type="text" value="Image 1"/>		



Image 1


Image 2


Uploaded Image


Image 3


Image 4


Current Logo Image

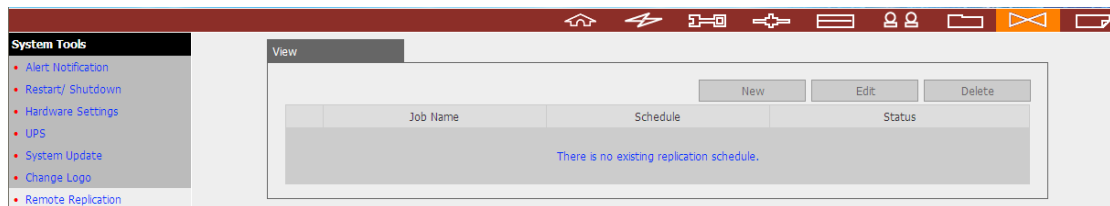
Note: For the best image effect, the recommended size for the image is 100 x 100 pixels.

3.8.7 Remote Replication (Disaster Recovery)

Remote Replication enables you to replicate files on TS-109 to another TS-109 or QNAP NAS series. The files will be compressed before the replication process in order to save time for data transfer. **Make sure a network share is created before creating a remote replication task.**

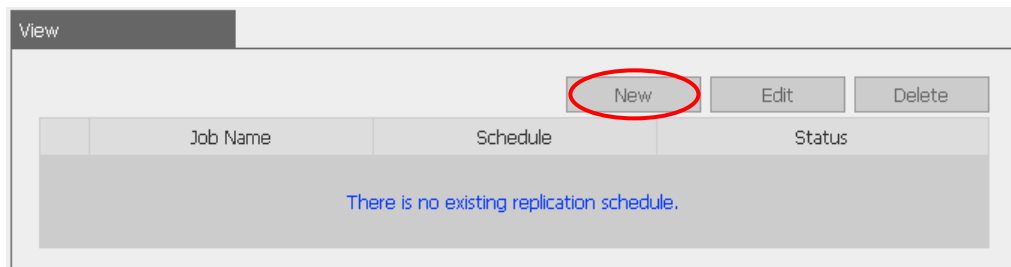
Using Remote Replication

Login TS-109 and go to Remote Replication in System Tools.



i. New

- a. Click **New** to enter the following page.



- b. Complete all settings and click **OK** to save or **Cancel** to quit.

Add a remote replication job

Job Name

Remote Destination

Remote Host IP Address

Destination Path (Network Share/Directory) /

User Name

Password

Remote Host Testing (Status: --)

Local Source

Source Path (Network Share/Directory) /

☒ Replicate Now

Replication Schedule Hour : Minute

☐ Daily

☐ Weekly

☐ Monthly Day

☐ Enable encryption, port number: (You have to allow SSH encryption connection on the remote host server.)

☐ Activate file compression

☐ Stop network file services while replicating

☐ Perform incremental replication

☐ Delete extra files on remote destination

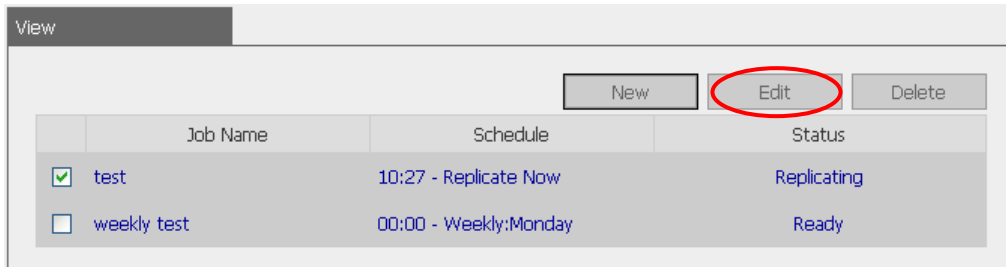
- c. The port for remote replication is 873. If you are using two TS-109 servers behind an NAT router, please open the port 873 on NAT router and forward the port to the corresponding LAN IP of TS-109. Otherwise, the remote replication service will be blocked by NAT.



Note: To use remote replication, enable Microsoft Networking service, make sure the destination network share and directory have been created, and the user name and password are valid to login the destination folder.

ii. Edit

- Select the task to be edited.
- Click **Edit**.
- Modify the settings.
- Click **OK** to save or **Cancel** to quit.

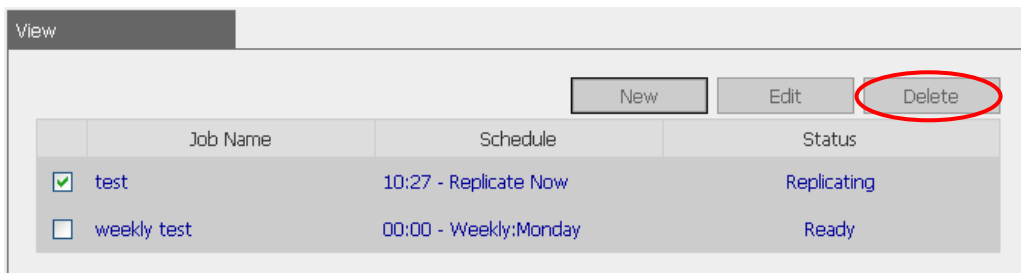


The screenshot shows a window titled 'View' with a table of tasks. The 'Edit' button is circled in red. The table has columns for Job Name, Schedule, and Status.

	Job Name	Schedule	Status
<input checked="" type="checkbox"/>	test	10:27 - Replicate Now	Replicating
<input type="checkbox"/>	weekly test	00:00 - Weekly:Monday	Ready

iii. Delete

- Select the task to be deleted.
- Click **Delete**.



The screenshot shows the same 'View' window as before, but the 'Delete' button is circled in red. The table content remains the same.

	Job Name	Schedule	Status
<input checked="" type="checkbox"/>	test	10:27 - Replicate Now	Replicating
<input type="checkbox"/>	weekly test	00:00 - Weekly:Monday	Ready

3.8.8 Backup/ Restore/ Reset Settings

- To backup all settings, including user accounts, server name and network configuration etc., click **Backup** and select to open or save the setting file.
- To restore all settings, click **Browse** to select a previously saved setting file and click **Restore** to confirm.
- To reset all settings to default, click **Reset**.

Backup/ Restore/ Reset Settings

- To restore all settings, click Browse to select a previously saved setting file and click Restore to confirm.
- To backup all settings, including user accounts, server name and network configuration etc., click Backup and select to open or save the setting file.
- To reset all settings to default, click Reset.

3.8.9 IP Filter

Enter the IP address or network from which the connections to this server will be allowed or rejected. When the connection of a host server is denied, all protocols of that server will not be allowed to access the local server.

IP Filter

Enter the IP address or network from which the connections to this server will be allowed or rejected.

☒ Allow all connections
☐ Allow connections from the list only
☐ Deny connections from the list

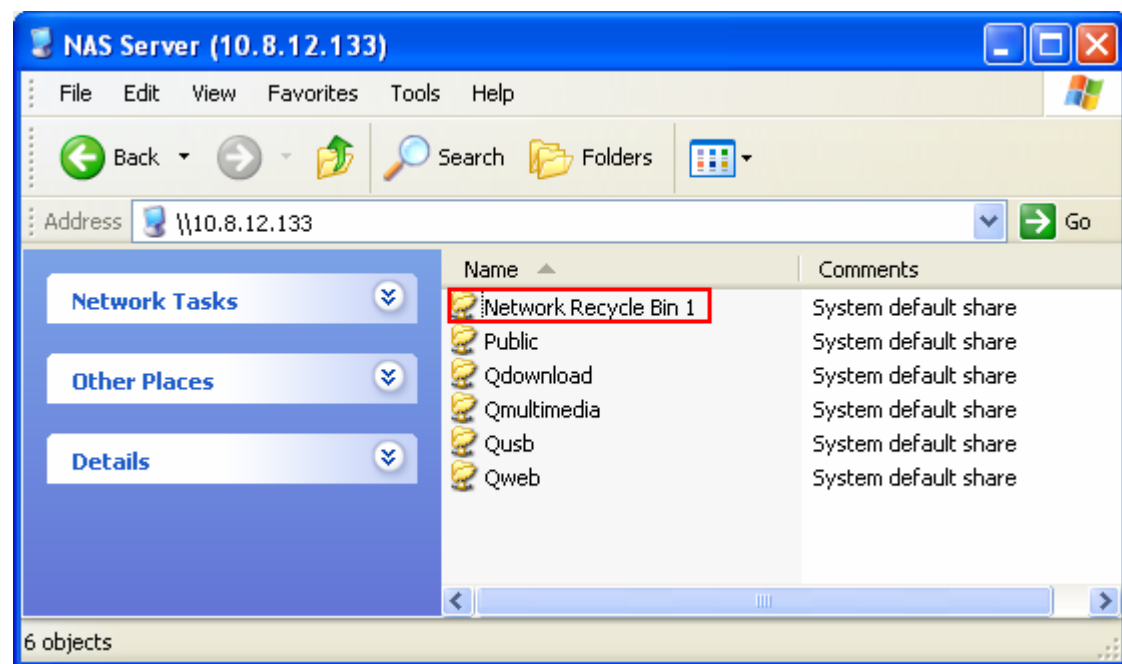
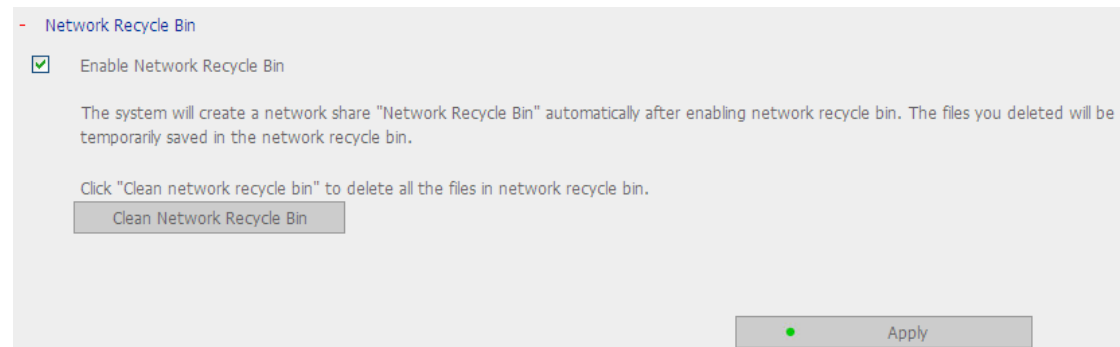
☒ Single IP address
☐ Specify IP addresses of certain network by setting IP address and netmask.
IP: . . .
Netmask: 255. 255. 0 .
0

Note: All network service will be restarted after you apply the settings.

3.8.10 Network Recycle Bin

This function enables files deleted on the shares of TS-109 to be removed to Network Recycle Bin to reserve the files temporarily. To enable this function, check the box "Enable Network Recycle Bin" and click **Apply**. The system will create a network share "Network Recycle Bin" automatically.

To delete all the files in network recycle bin, click "Clean Network Recycle Bin".



3.8.11 Remote Login

After enabling this option, you can access this server via Telnet or SSH encrypted connection (only the account "admin" can login remotely). You can use certain Telnet or SSH connection clients for connection, e.g., putty. Please make sure you have opened the configured ports on your router or firewall when using this function.

Remote login

After enabling this option, you can access this server via Telnet or SSH connection (only the account "admin" can login remotely).

☐

Allow Telnet connection

Port

13131

☐

Allow SSH connection

Port

22

Apply

3.9 Event Logs

TS-109 can store thousands of recent event logs, including warning, error and information messages. In case of system malfunction, event logs can be retrieved to analyze system problems.

Event Logs

- Event Logs

Display: All events | There are 53 events. | 1

Type		Date	Time
Information	System was shut down on Fri Jan 6 18:09:48 CST 2006.	01/06/2006	18:01:36
Information	System was updated successfully from 1.0.0 to 1.0.0	01/06/2006	18:09:48
Information	System was updated successfully from 1.0.0 to 1.0.0	01/06/2006	18:07:27
Information	System was updated successfully from 1.0.0 to 1.0.0	01/06/2006	16:27:17
Information	System started.	01/05/2006	11:07:22
Information	System was shut down on Thu Jan 5 11:09:27 CST 2006.	01/05/2006	11:09:27
Error	NIC Link is Down.	01/05/2006	11:09:25
Information	Remote backup schedule qqg finished successfully.	01/04/2006	18:01:14
Information	Remote backup schedule qqg starting.	01/04/2006	18:01:13
Information	Remote backup schedule qqg finished successfully.	01/04/2006	18:00:42

Refresh

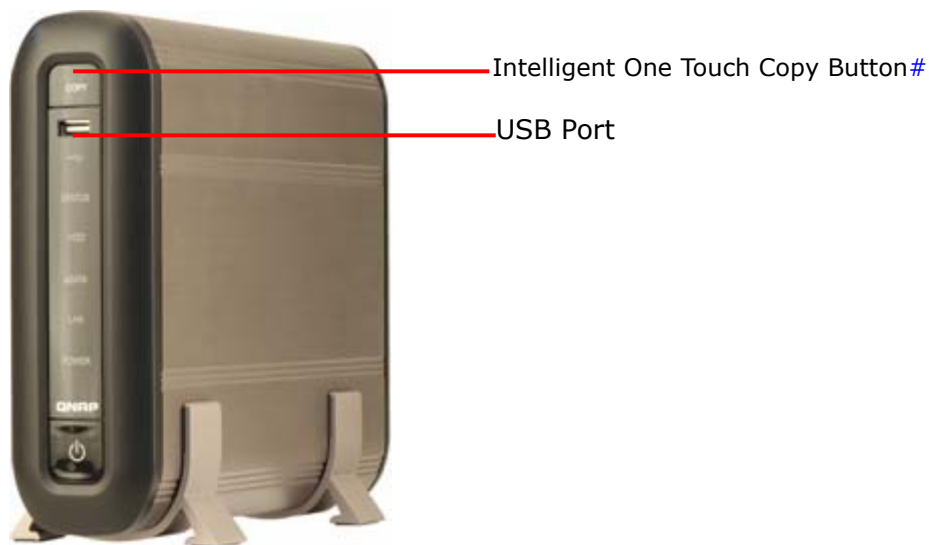
Clear

Chapter 4 Copy Data Directly by Front USB

Port to TS-109

TS-109 supports direct copy of data on USB devices to TS-109 by using the Copy button. To use this function, please follow the steps below:

1. Make sure a SATA disk is installed correctly in TS-109 according to the instructions in Chapter 2.1.
2. Turn on TS-109.
3. Format the SATA disk in SATA Disk page of Device Configuration (refer to Chapter 3.5.1). A system default folder **Qusb** will be created in TS-109.
4. Connect USB devices, e.g. digital camera, flash to the front USB port of TS-109.
5. Press the **Copy** button on TS-109. All data on the USB device will be copied to the folder **Qusb/(xxxxyyzz)*** on TS-109 instantly.



#Intelligent one touch copy button: TS-109 will detect the data in the connected USB device automatically. The first time a USB device is connected, press the Copy button and TS-109 will copy all data in the device automatically. When the same device is connected again and there are changes to the data in the device, press the Copy button and TS-109 will copy all files in the device. If there are no changes, press the Copy button and TS-109 will not copy the files.

* xxxx: year ; yy: month; zz: date

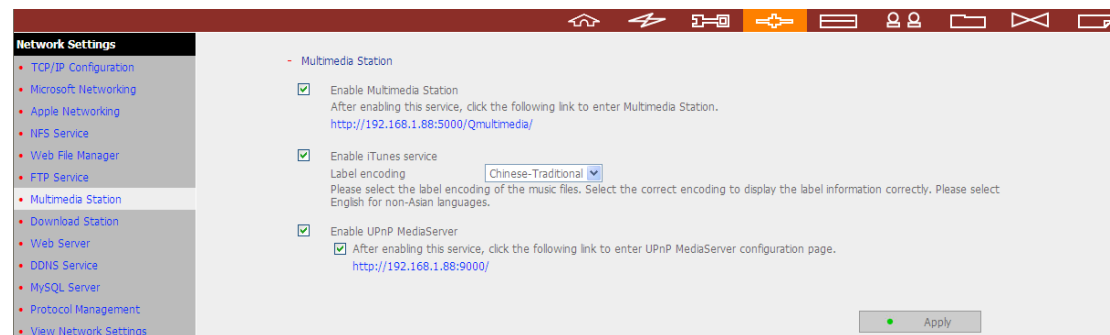
Chapter 5 Multimedia Station

5.1 Share Photos and Multimedia Files via Web Interface

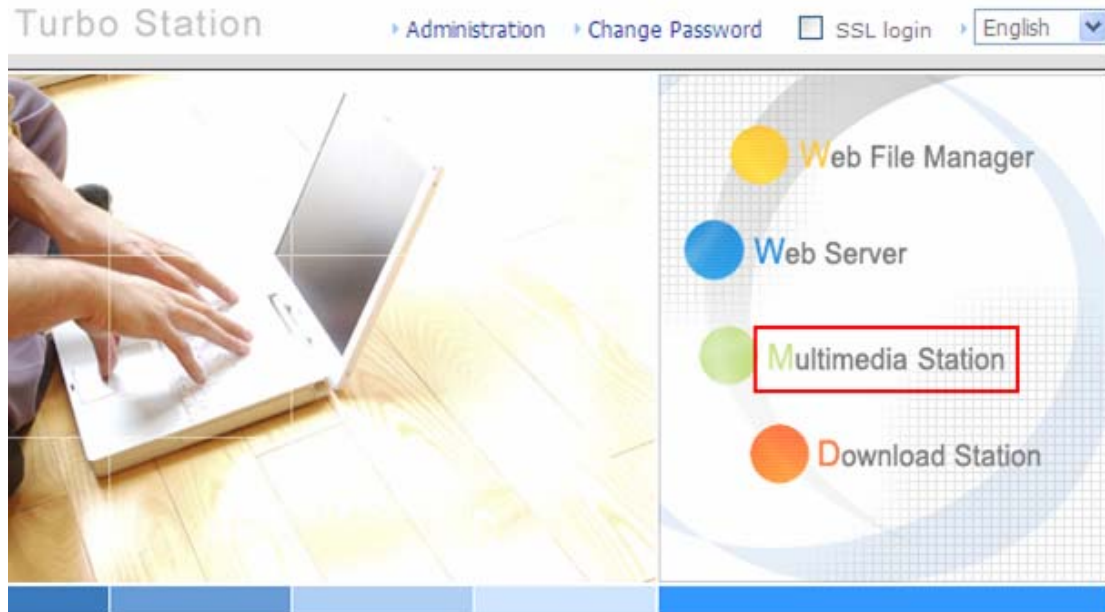
TS-109 provides a user-friendly web management interface for you to manage personal albums easily. You can view images and multimedia files, or browse photos by thumbnails preview.


A. Upload photos by web administration

1. To use Multimedia Station of TS-109, make sure a SATA disk is installed correctly in TS-109 according to the instructions in Chapter 2.1. A share folder **Qmultimedia** will be created. Enable Multimedia function in **Network Settings**.



2. Click on the link <http://TS-109 IP/Qmultimedia> on Multimedia Station page or click **Multimedia Station** on the login page of TS-109 to access Multimedia Station.



3. Click  on the top right hand corner. Login with administrator name and password to manage Multimedia Station. Users without administration right can view the photos and multimedia files on Multimedia Station but they do not have the right to modify the files. When logging in as Multimedia Station user, you can access the albums authorized for browsing.



4. Click **Browse** to select the multimedia file and then click **Upload** to upload the file to the folder.

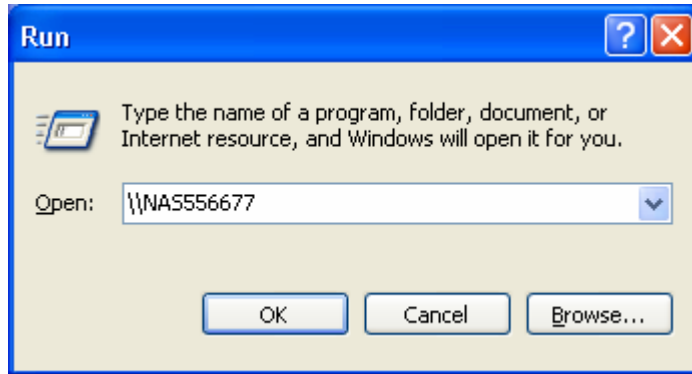


5. You can also create folders by clicking  and upload files to the folders.

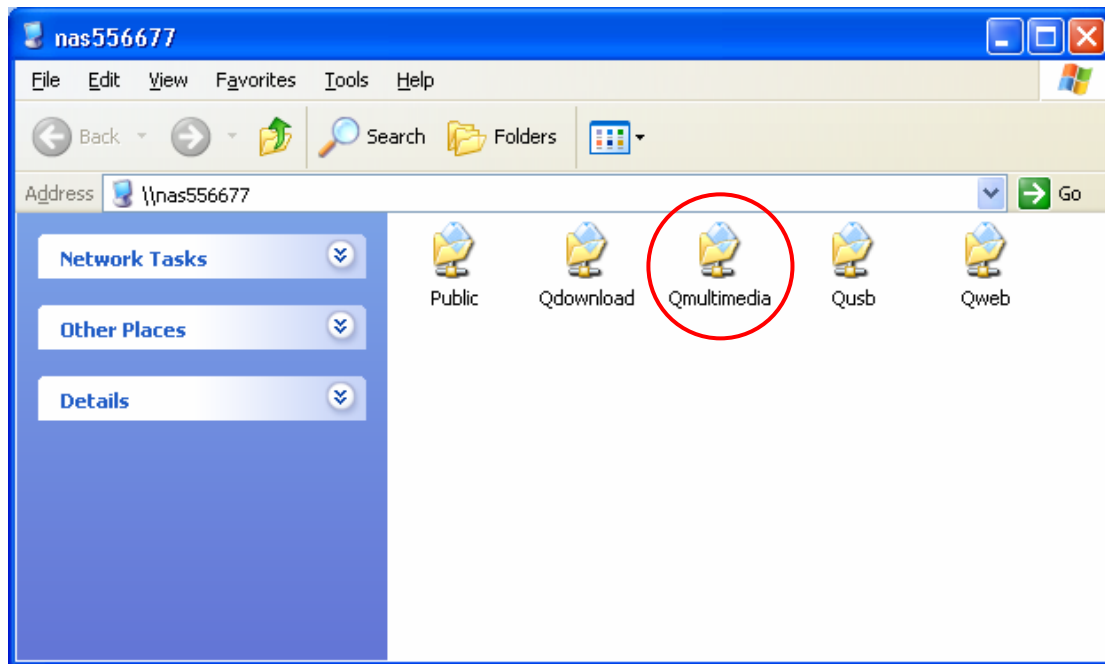
B. Upload photos to Qmultimedia folder directly

You can upload multimedia files to TS-109 directly by the following steps.

1. Use **Run** function in Windows. Enter \\[server name] or \\[server IP] to access share folder on TS-109.



2. Open the folder Qmultimedia. Enter the user name and password to login.



3. Drag the files and folders to the folder directly. Please wait patiently when TS-109 is generating thumbnails for images during uploading.

When you login Multimedia Station by web browser again, all multimedia files will be shown.



Buttons on Multimedia Station page

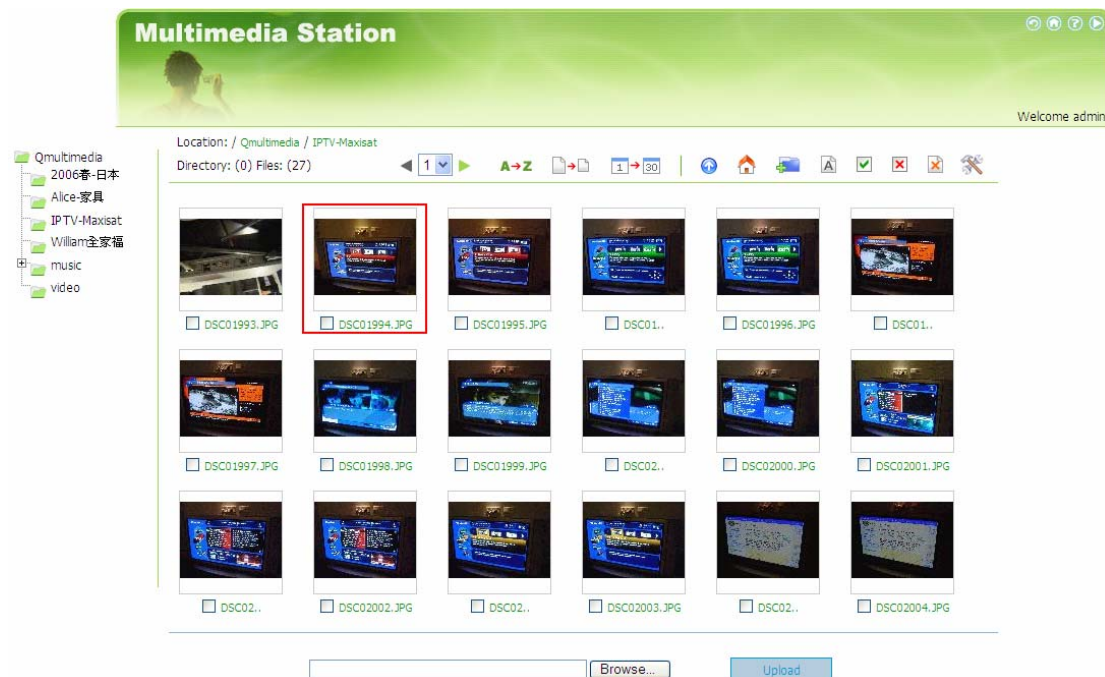
	Sort files by name
	Sort files by size
	Sort files by date
	Return to previous page
	Return to Home
	Create folder
	Rename file or folder
	Select all
	Select none
	Delete

Support file format list

Type	File format
Picture	jpg, bmp, gif
Video	wmv, wmx, wvx, avi, mpeg, mpg, mpe, m1v, mp2, mpv2, mp2v, mpa, dvr-m, asf, asx, wpl, wm, wmx, wmd, wmz
Audio	wma, wax, cda, wav, mp3, m3u, mid, midi, rmi, aif, aifc, aiff, au, snd
Others	(Other formats not mentioned above)

View Photo Information

1. To view detailed information of a photo, click on the thumbnail of the picture.














2. The information of the photo, e.g. file name, resolution, size, camera producer will be shown on the right. You can enter a description for the picture in the box below the photo and click **Submit**. To reset the description to previously saved version, click **Reset**.



Buttons Description

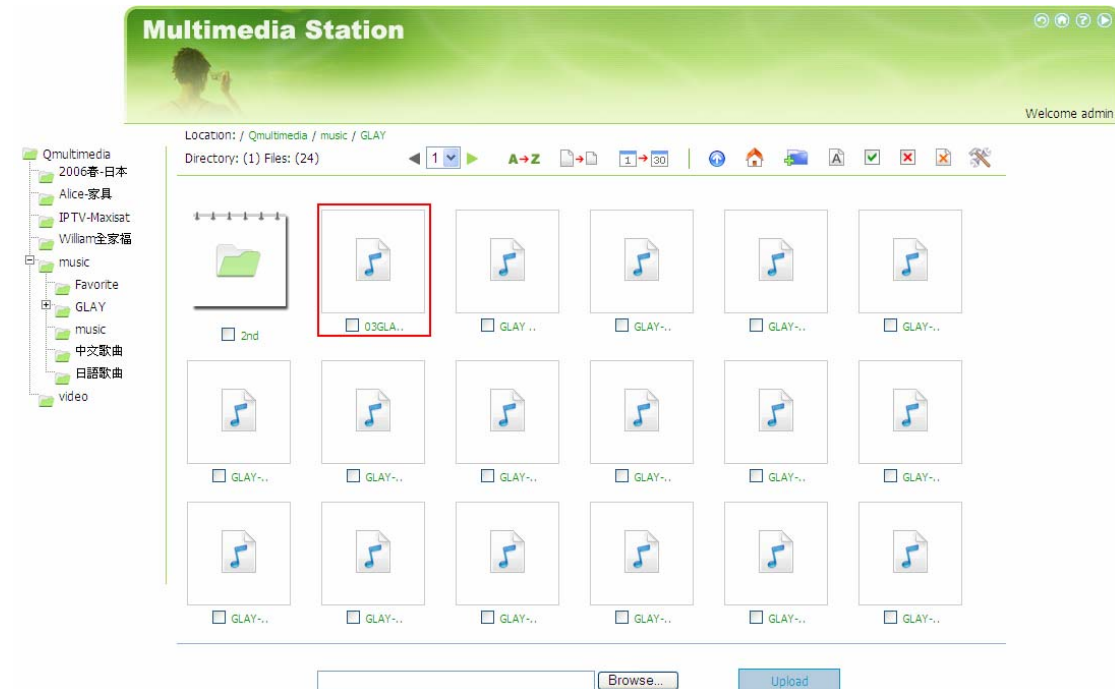
You can use the buttons on top of the photo to manage the album.

	Back to previous level
	Previous image
	Next image
	Rotate image anticlockwise
	Rotate image clockwise
	Zoom in
	Zoom out
SlideShow: <input type="text" value="3"/>  	Play slideshow. Select the time interval in seconds. Click play to play slide show. To stop playing, click stop .
	Print the image
	Save the picture
	Set the picture as album cover


Play music or video files

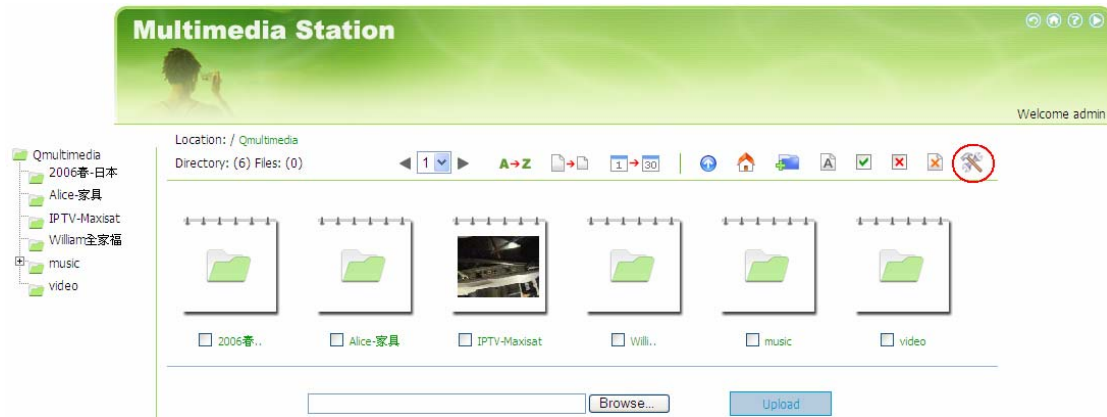
To play music or video files on Multimedia Station, you can click on the thumbnail of the file displayed on the page. The file will be played by the default music or video playing program of your PC.


*It is recommended to use Media Player 10.0 or above as the default playing program





C. Configure album authority

1. After logging in as administrator (admin), click  to enter the configuration page for album authority.




2. You can view, add, delete and edit users. For any inquiries when using these functions, click on the help button  on the top right corner of the page.



User list [Create user](#)  

User list

User name	Status	Maintain	Description
guest	Enable	---	System default user; you can set the authority of the guests for browsing the album.
baby	Enable	Delete	baby
jeffrey	Enable	Delete	jeffrey

3. You can edit user profile and album access authority on this page. For any inquiries when using these functions, click on the help button  on the top right corner of the page.

[User list](#) [Create user](#)

Create user

User name:

Description:

Password:

Verify Password:

☐ User cannot change the information.

☐ Disable

Accessible albums

Add

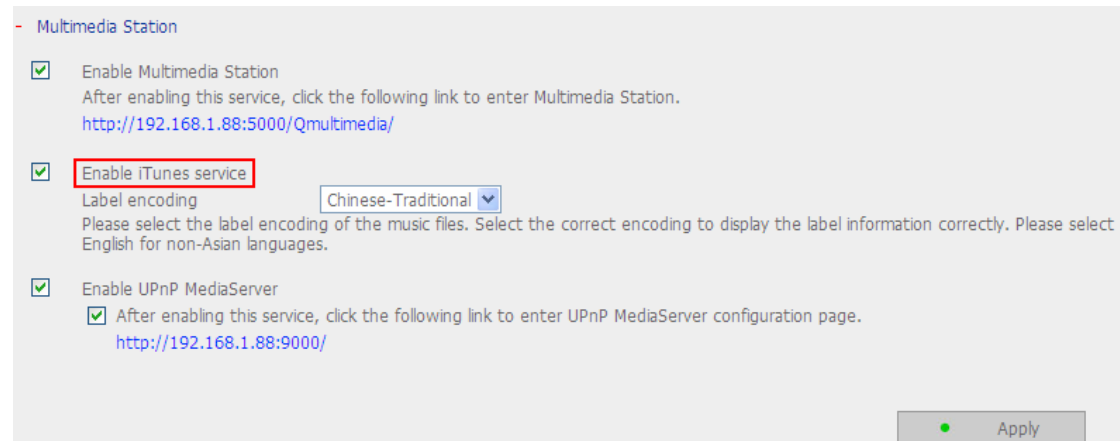
Remove

Inaccessible albums

William全家福
2006春-日本
Alice-家具
IPTV-Maxisat
video
music

5.2 Enable iTunes Service

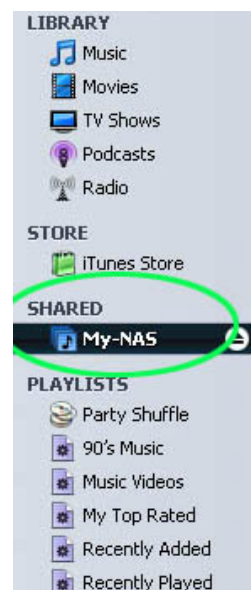
Enable iTunes service on TS-109. The mp3 files on Qmultimedia folder of TS-109 will be shared via iTunes. All the computers with iTunes installed on LAN will be able to find, browse and play the music files on TS-109.



The screenshot shows the 'Multimedia Station' configuration window. It contains three main sections, each with a checked checkbox:

- Enable Multimedia Station**: Includes instructions to click a link to enter Multimedia Station: <http://192.168.1.88:5000/Qmultimedia/>.
- Enable iTunes service**: This option is highlighted with a red rectangle. Below it is a 'Label encoding' dropdown menu set to 'Chinese-Traditional'. A note states: 'Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages.'
- Enable UPnP MediaServer**: Includes instructions to click a link to enter UPnP MediaServer configuration page: <http://192.168.1.88:9000/>.

An 'Apply' button with a green status indicator is located at the bottom right.

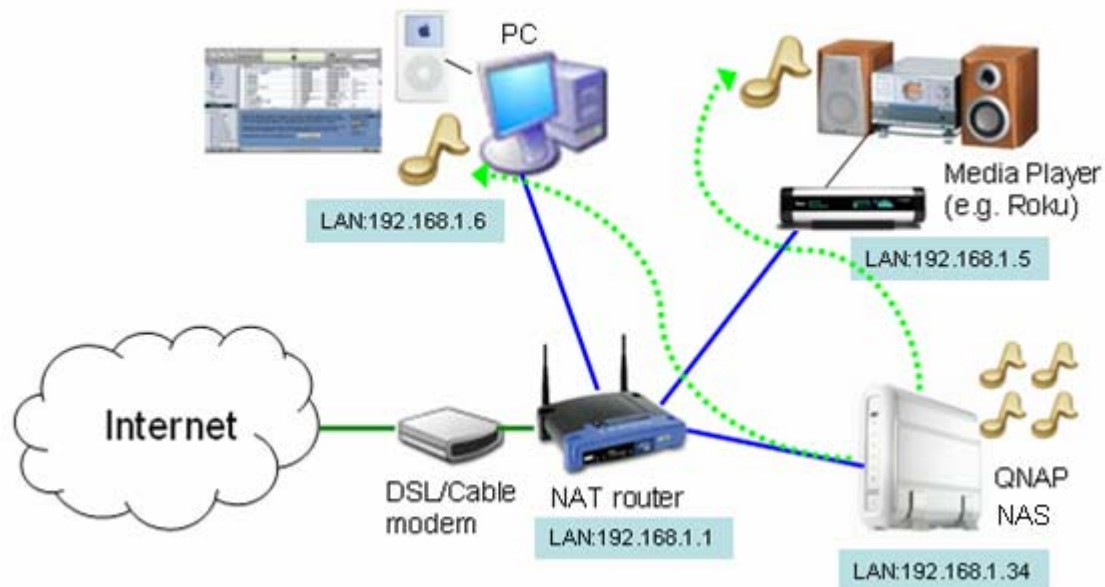




Note: You can download the latest iTunes software from official Apple website <http://www.apple.com>.

5.3 Use UPnP Media Server

TS-109 is built-in with TwonkyMedia, DLNA compatible UPnP media server. Enable this function and TS-109 will share particular music, photos or video files to DLNA network. You can use DLNA compatible digital media player (DMP), to play the multimedia files on TS-109 on TV or acoustic sound system.



To use UPnP Media Server, please enable this function and click the following link (<http://TS-109 IP:9000/>) to enter the configuration page of UPnP Media Server.

- Multimedia Station

☒ Enable Multimedia Station
After enabling this service, click the following link to enter Multimedia Station.
<http://192.168.1.88:5000/Qmultimedia/>

☒ Enable iTunes service
Label encoding Chinese-Traditional
Please select the label encoding of the music files. Select the correct encoding to display the label information correctly. Please select English for non-Asian languages.

☒ **Enable UPnP MediaServer**
☒ After enabling this service, click the following link to enter UPnP MediaServer configuration page.
<http://192.168.1.88:9000/>

Apply

Click on the link <http://TS-109 IP:9000/> to enter UPnP Media Server configuration page and configure the following settings.

- (1) Language: Select the display language.
- (2) Server Name: Enter the name of TS-109 UPnP Media Server. This name will be shown on DMP operation interface, e.g. NAS.
- (3) Content Locations: Select the share folder on TS-109 to be shared to DMP. The default folder is Qmultimedia. You can add more than one share folder.

Click **Save Changes** to save the settings.

After configuring the settings, you can upload mp3, photos, or video files to Qmultimedia folder or other specified folders on TS-109.



Note: If you upload multimedia files to the default share folder but the files are not shown on Media Player, you can click "Rescan content directories" or "Restart server" on the Media Server configuration page.

The built-in UPnP Media Server of TS-109 is compatible with the DLNA DMP devices in the market.

About UPnP and DLNA

Universal Plug and Play (UPnP) is a set of computer network protocols promulgated by the UPnP Forum. The purpose of UPnP is to allow devices to connect seamlessly and to simplify the implementation of networks at home and in corporate environment. UPnP achieves this by defining and publishing UPnP device control protocols built upon open, Internet-based communication standards.

The term UPnP is gleaned from Plug-and-play, a technology for dynamically attaching devices to a computer directly.

The Digital Living Network Alliance (DLNA) is an alliance of a number of consumer electronics, mobile and personal computer manufacturers. Its aim is to establish a home network in which the electronic devices from all companies are compatible with each other under an open standard. The alliance also tries to promote the idea of digital home by establishing DLNA certification standard. All DLNA certified products connected to the home network can be accessed seamlessly to enable consumers to enjoy digital life conveniently.

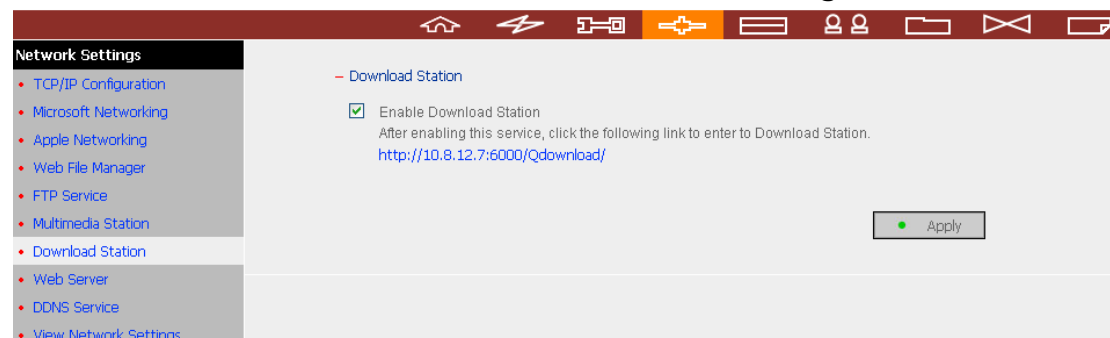
Chapter 6 Download Station

TS-109 supports BT, HTTP, and FTP download mechanisms. You can add download task to TS-109 and let the server finish downloading independent of PC.

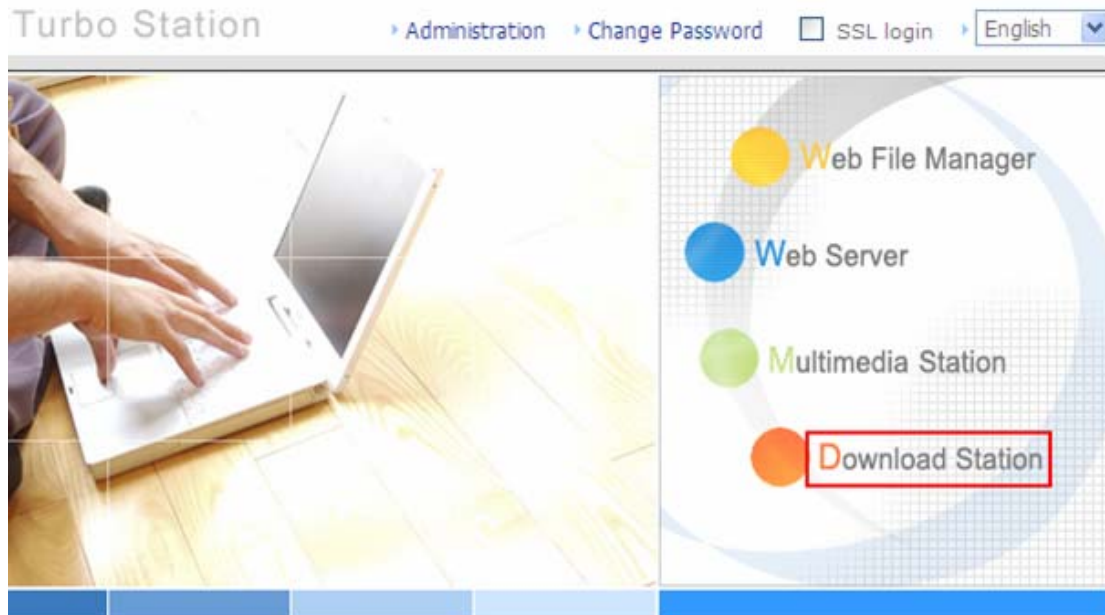


Warning: Please be warned against illegal downloading of copyrighted materials. The Download Station functionality is provided for downloading authorized files only. Downloading or distribution of unauthorized materials may result in severe civil and criminal penalty. Users are subject to the restrictions of the copyright laws and should accept all the consequences.

1. To use Download Station, make sure a SATA disk is installed correctly in TS-109 according to the instructions in Chapter 2.1. A share folder **Qdownload** will be created. Enable this function in **Network Settings**.



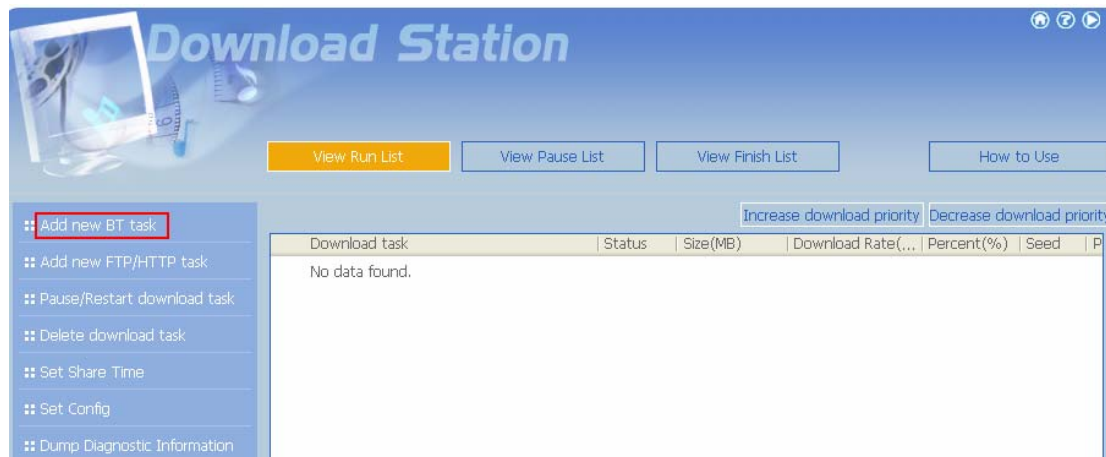
2. Click on the link <http://TS-109 IP/Qdownload> on Download Station page or click **Download Station** on the login page of TS-109 to access Download Station.



3. Select **Add new BT task** or **Add new FTP/HTTP task**.

(A) Add new BT task

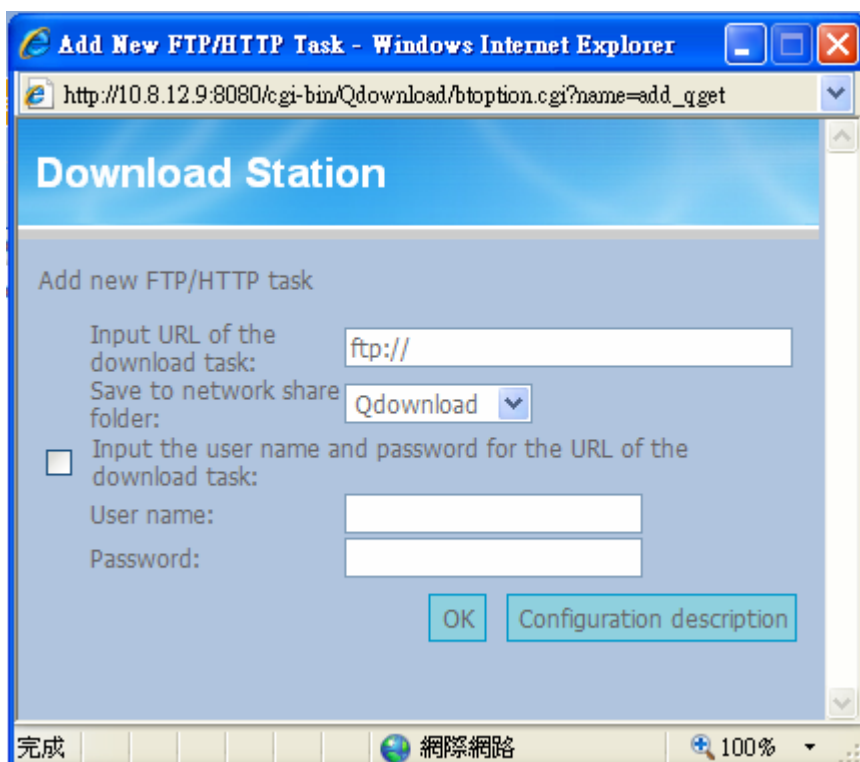
Click **Add new BT task** on the left and upload a torrent file. You can download legal torrent files by searching on the Internet. There are websites that provide legally sharing torrents e.g. www.legaltorrents.com. Please download the torrent files to your local disk and then upload them to TS-109.



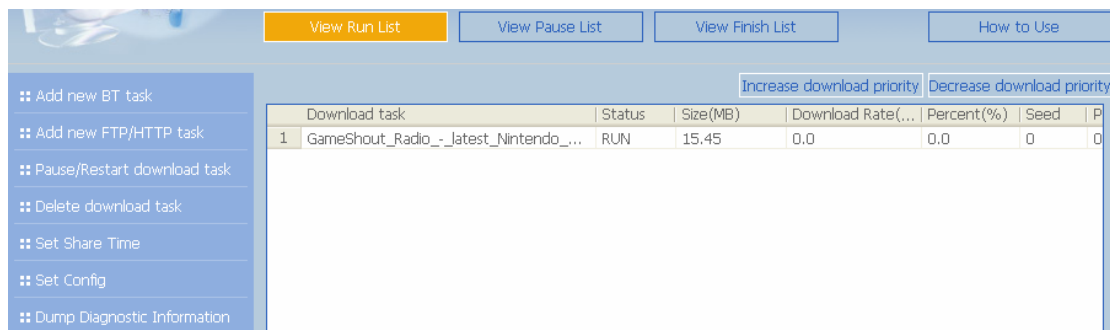
(B) Add new FTP/HTTP task

To run an FTP download task, click **Add new FTP/HTTP task**. Enter the FTP URL of the download task and select the share folder to save the files. Enter the user name and password to login the FTP server (if necessary). Then click **OK** to start downloading.

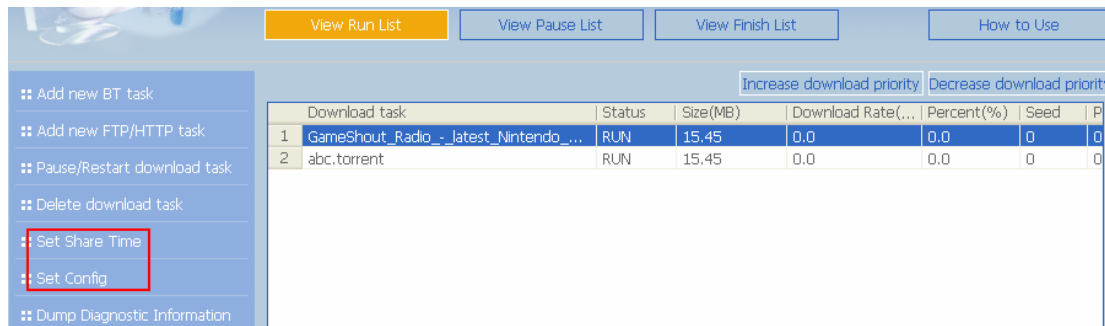
To run an HTTP download task, click **Add new FTP/HTTP task**. Enter the HTTP URL of the download task and select the share folder to save the files. Then click **OK** to start downloading.



4. After uploading a download task, the task will appear on **View Run List**.



5. You can select a download task and click **BT** to enable or disable DHT public network and configure the sharing time after download completes. You can select an available download task and click **Set Share Time** to configure the time for sharing the torrent file, or click **Set Config** to set the maximum number of downloads at the same time (default value is 3). You can also set the maximum download and upload rate (default value is 0, which means unlimited), and port range (default range is 6881-6899).



The screenshot shows the Download Station interface. On the left, there is a sidebar with several options: "Add new BT task", "Add new FTP/HTTP task", "Pause/Restart download task", "Delete download task", "Set Share Time" (highlighted with a red box), "Set Config", and "Dump Diagnostic Information". On the right, there is a table of download tasks.

Download task	Status	Size(MB)	Download Rate(...)	Percent(%)	Seed	P
1 GameShout_Radio_-_latest_Nintendo_...	RUN	15.45	0.0	0.0	0	0
2 abc.torrent	RUN	15.45	0.0	0.0	0	0



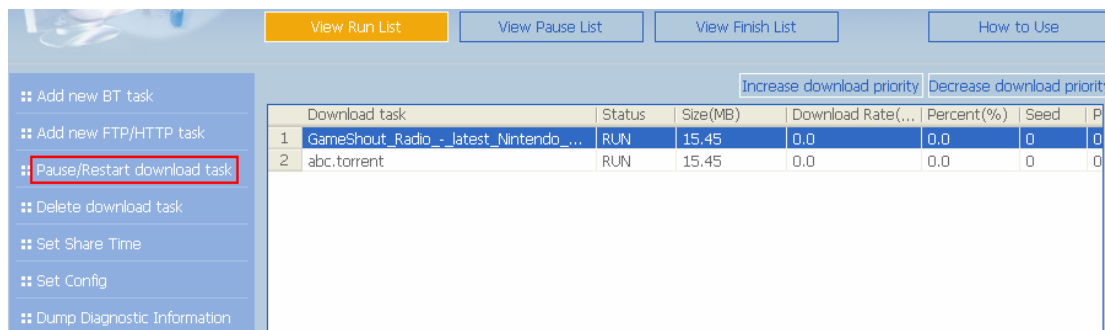
The screenshot shows a Windows Internet Explorer browser window titled "Edit Share Time - Windows Internet Explorer". The address bar shows the URL "http://10.8.12.9:8080/cgi-bin/Qdownload/btoption.cgi?name=edit&page=run&jo". The main content area is titled "Download Station" and contains the following text: "Sharing time after download task completes: 0 hr". Below this, there is a checkbox labeled "Use public DHT network" which is currently unchecked. At the bottom of the content area, there are two buttons: "Apply" and "Configuration description". The browser's status bar at the bottom shows "完成" (Completed) and "網際網路" (Internet).



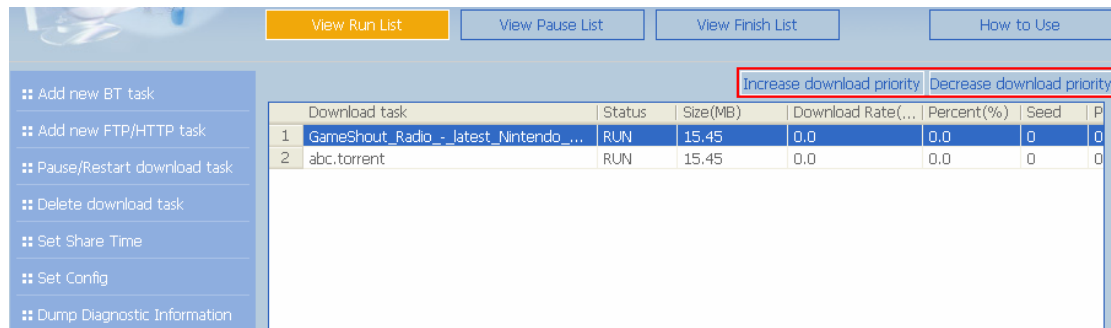
Note: If the sharing time (larger than 0 hr) is set for a download task, the download task will be moved to Finish List after download completes and the sharing time ends.



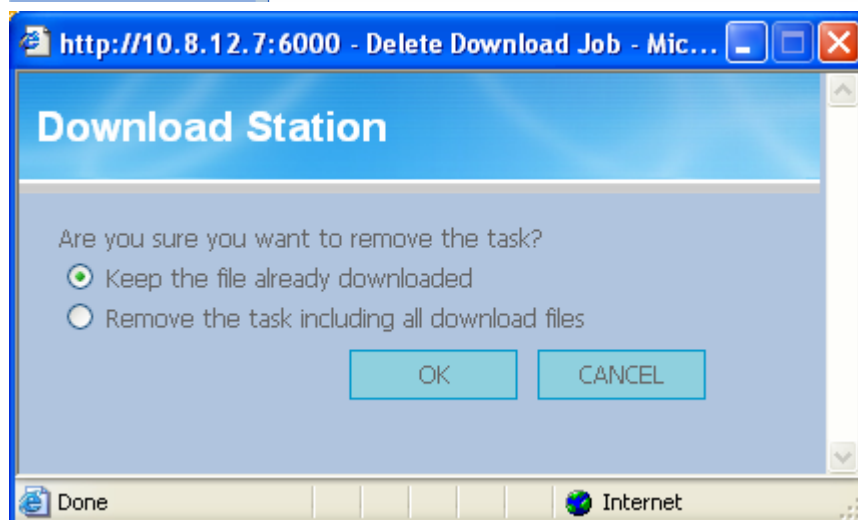
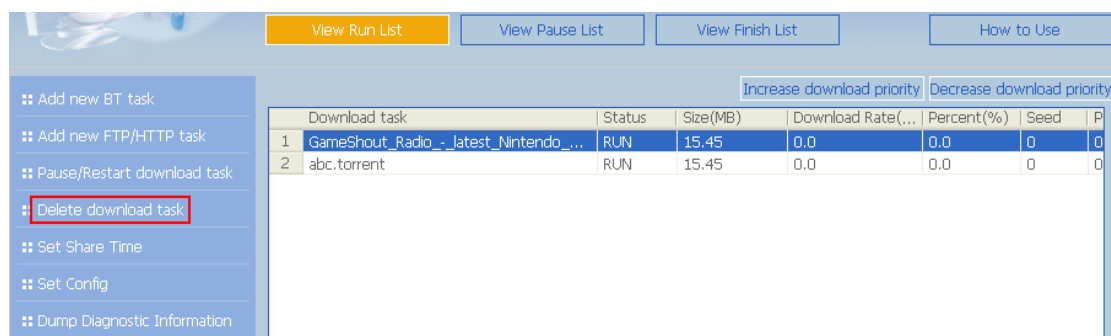
6. To pause a running download task, select the task in **View Run list** and click **Pause/ Restart download task**. You can view tasks that are paused or finished in View Pause List and View Finish List respectively. To restart a paused task, select the task in **View Pause List** and click **Pause/ Restart download task**.



7. You can also increase or decrease task priority by clicking **Increase download priority** and **Decrease download priority** when there are multiple download tasks.

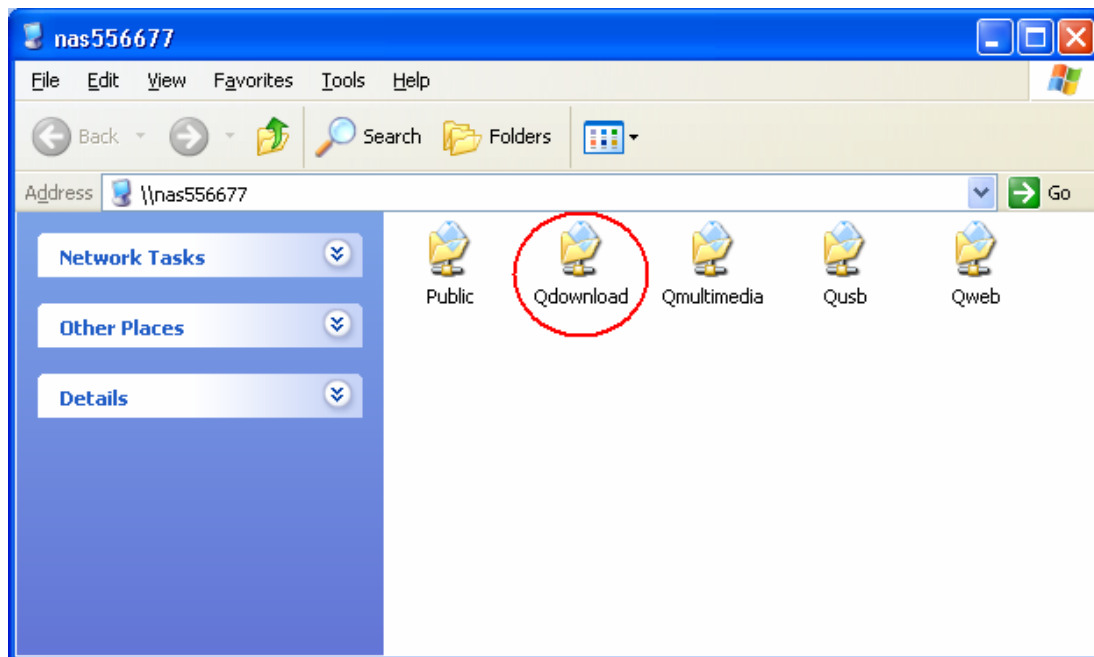


8. To delete a running, paused, or finished task, select the task and click **Delete download task**. You can select to remove the download task only and retain the downloaded files, or remove the task and downloaded files.



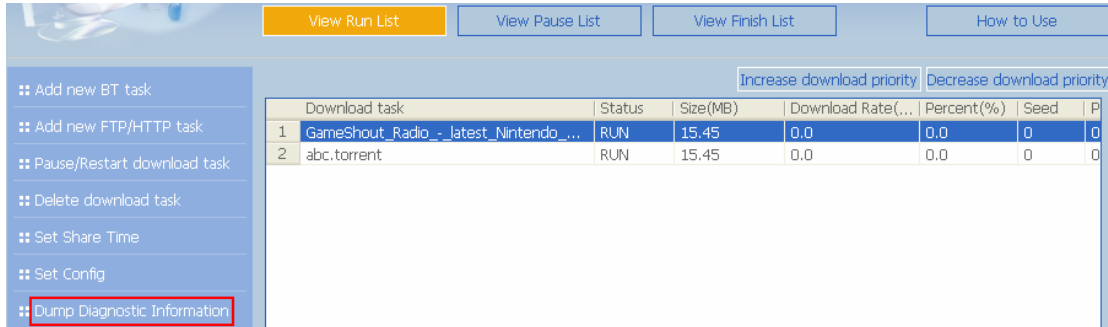
9. To logout Download Station, click  on the top right hand corner.

10. To access the folders you have downloaded, please go to the share folder **Qdownload** of TS-109.



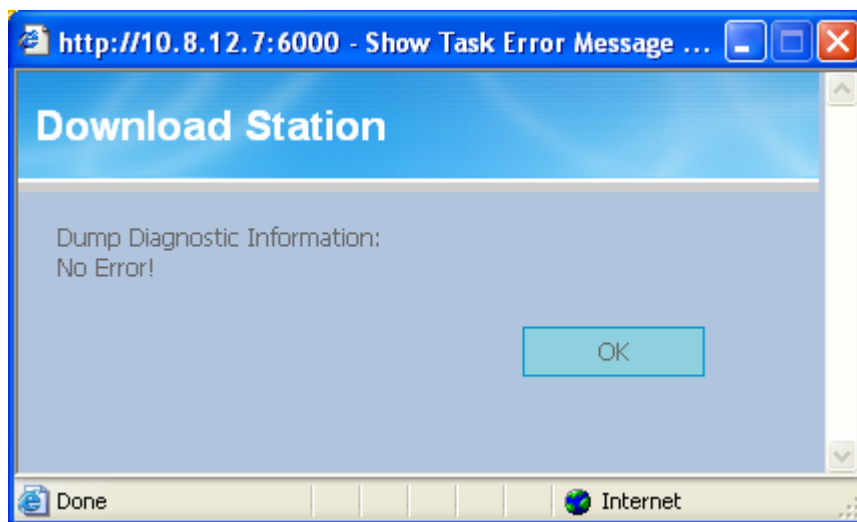
Dump Diagnostic Information

To view the diagnostic details of a download task, select a task on the list and click [Dump Diagnostic Information].



The screenshot shows the 'Download Station' web interface. On the left is a sidebar menu with options: 'Add new BT task', 'Add new FTP/HTTP task', 'Pause/Restart download task', 'Delete download task', 'Set Share Time', 'Set Config', and 'Dump Diagnostic Information' (which is highlighted with a red rectangle). The main area features a table of download tasks and several control buttons at the top.

	Download task	Status	Size(MB)	Download Rate(...)	Percent(%)	Seed	P
1	GameShout_Radio_-_latest_Nintendo_...	RUN	15.45	0.0	0.0	0	0
2	abc.torrent	RUN	15.45	0.0	0.0	0	0



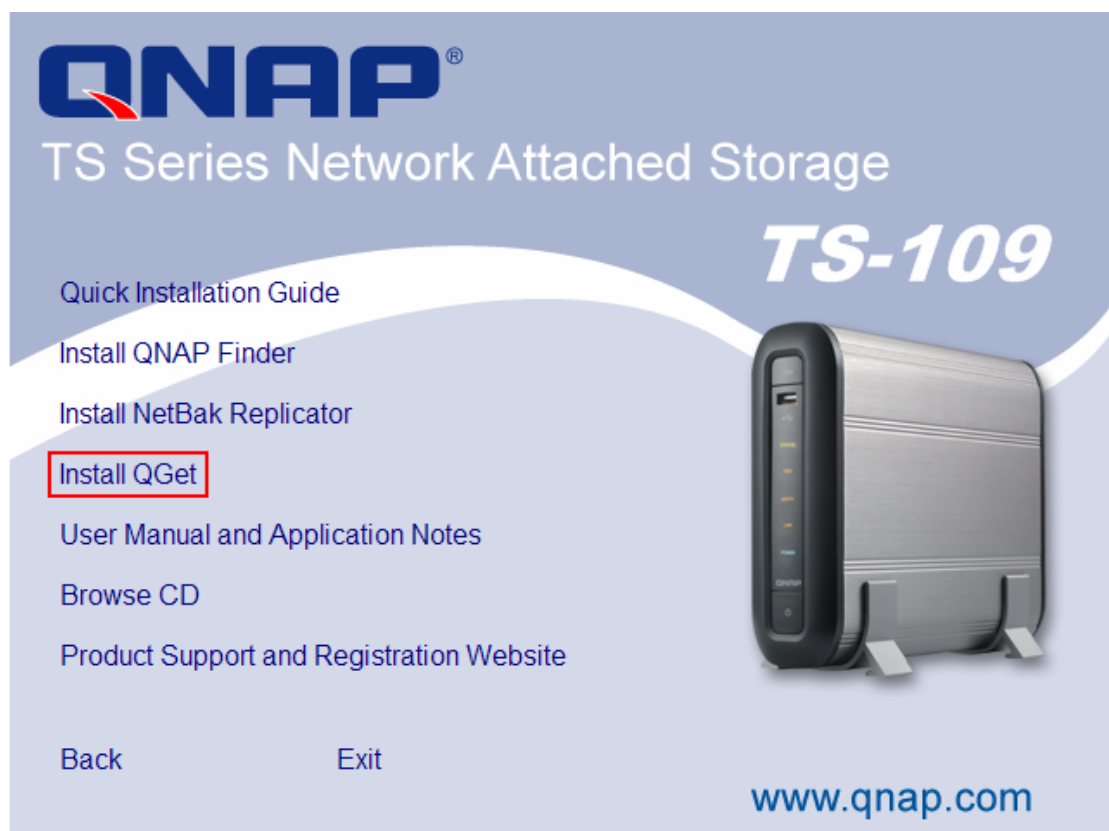
The common reasons for slow BT download rate or download error are as below:

- (1) The torrent file has expired, the peers have stopped sharing this file, or there is error in the file.
- (2) TS-109 has configured to use fixed IP but DNS server is not configured, or DNS server fails.
- (3) Set the maximum number of simultaneous downloads as 3-5 for the best download rate.
- (4) TS-109 is located behind NAT router. The port settings have led to slow BT download rate or no response. You may try the following means to solve the problem:
 - a. Open the BitTorrent port range on NAT router manually. Forward these ports to the LAN IP of TS-109.
 - b. The new TS-109 firmware supports UPnP NAT port forwarding. If your NAT router supports UPnP, enable this function on the NAT. Then enable UPnP NAT port forwarding of TS-109. The BT download rate should be enhanced.

6.1 Use Download Software QGet

QGet is a powerful management software for maintaining the BT, HTTP and FTP download tasks of multiple TS series NAS servers via LAN or WAN. By using QGet, you no longer need to login the Download Station web interface of multiple servers and manage the settings one by one. Simply install QGet on any computer running Windows 2000/XP, you can manage the download tasks of all your NAS servers.

1. To use QGet, install the software from the product CD-ROM.



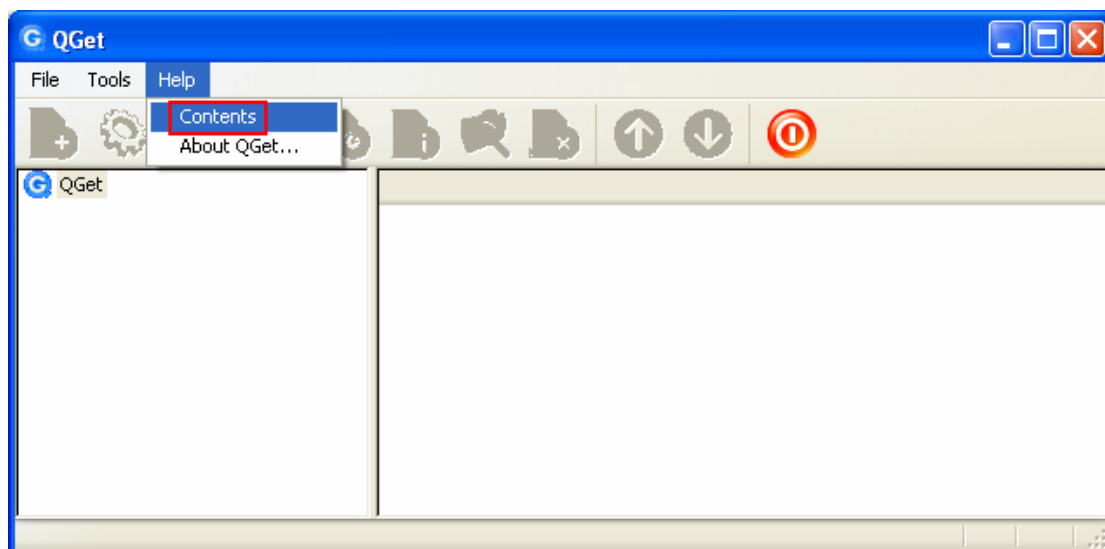
2. Follow the instructions to install QGet.



3. Run QGet from the installed location.



4. For the details of using QGet, please refer to the online help of the software.



Chapter 7 Web Server

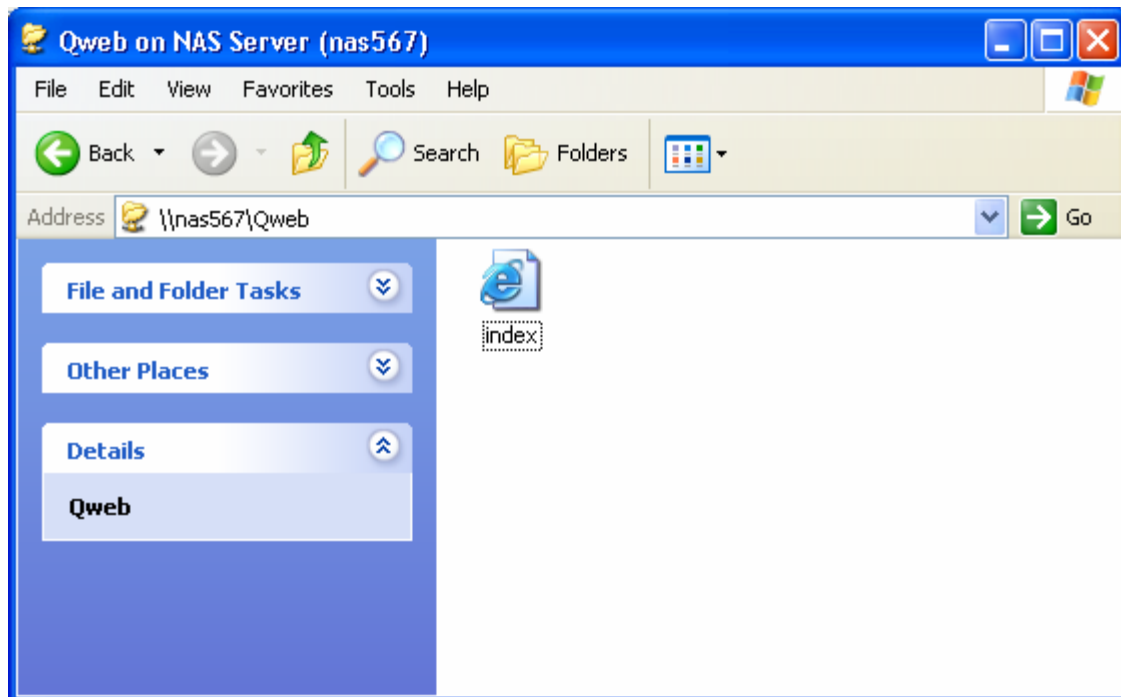
TS-109 enables you to upload web pages and manage your own website easily by Web Server function. It also supports PHP and MySQL/SQLite for you to establish an interactive website. Once you activate Web Server function, you can access your own homepage from anywhere. You can add hyperlinks in your homepage to connect to all the features of TS-109, such as Download Station, Multimedia Station and Web Server.

1. To use Web Server, make sure a SATA disk is installed correctly in TS-109 according to the instructions in Chapter 2.1. A share folder **Qweb** will be created. Enable Web Server function and enter the port number in **Network Settings**.

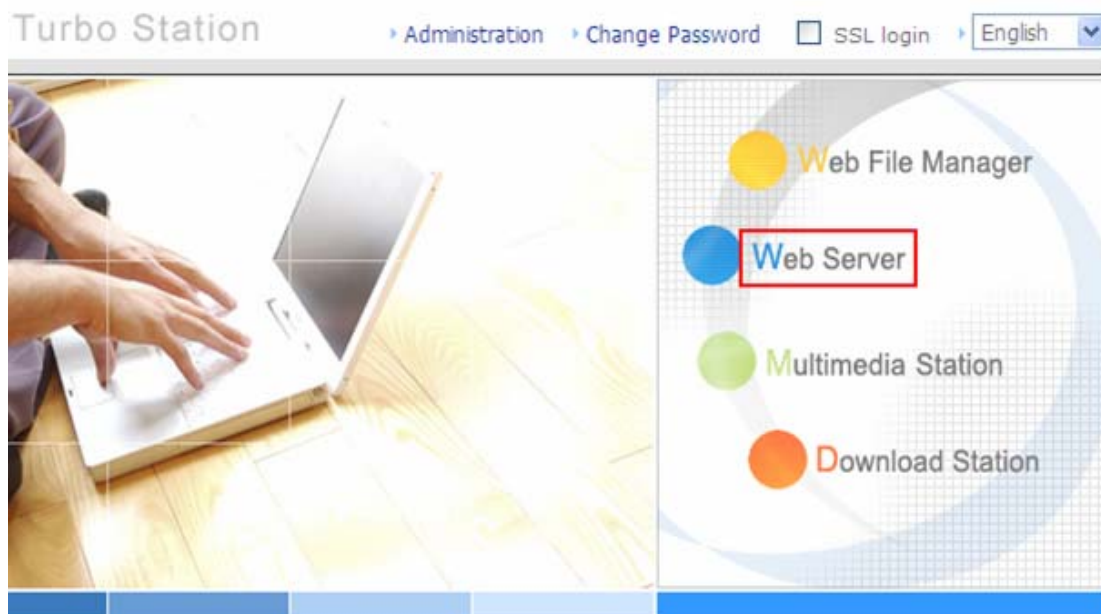
The screenshot shows the 'Web Server' configuration page. At the top, it says: 'After enabling this function, you can upload the webpage files to Qweb network share to publish your website.' Below this, there is a checked checkbox for 'Enable Web Server' with a 'View version' link. The 'Port Number' is set to '80'. A note says: 'After enabling this service, click the following link to enter to Web Server.' followed by the URL 'http://192.168.1.88:80/'. There are radio buttons for 'register_globals' set to 'Off'. The 'SMTP Server' is set to 'mail'. There is an unchecked checkbox for 'Enable SMTP Authentication'. Below it are input fields for 'User Name' and 'Password'. An 'Apply' button is at the bottom right. At the bottom of the page, there is a checkbox for 'php.ini Maintenance' with a note: 'The file **php.ini** is the system configuration file of Web Server. After enabling this function, you can edit, upload or restore this file. It is recommended to use the system default setting.'

2. You can upload your HTML files to the folder Qweb by the following methods:
 - a. By using samba: You can open a web browser and type **\\[TS-109 IP]\Qweb** or **\\[TS-109 name]\Qweb**. Login the folder and upload your HTML files.
 - b. By FTP: You can login FTP service and upload your HTML files to the folder (please refer to Chapter 8).
 - c. By Web File Manager: You can login Web File Manager and upload your HTML files to the folder (please refer to Chapter 9).

The file index.html, index.htm or index.php will be the home path of your webpage.



3. Click on the link **http://TS-109 IP/** on Web Server page or click **Web Server** on the login page of TS-109 to access the web page you upload. Note that when Web Server is enabled, you have to type [http://TS-109 IP address:8080] in your web browser to access the login page of TS-109.



SQLite Management

SQLiteManager is a multilingual web-based tool to manage SQLite databases and can be downloaded from <http://www.sqlitemanager.org/>.

Please follow the steps below or refer to the INSTALL file in the downloaded SQLiteManager-*.tar.gz[?] to install the SQLiteManager.

- (1) Unpack your download file SQLiteManager-*.tar.gz.
- (2) Upload the unpacked folder **SQLiteManager-*** to **\\TS-109 IP\Qweb**.
- (3) Open the web browser and go to **http://TS-109 IP/SQLiteManager-*/**.

[?]: The symbol * refers to the version number of SQLiteManager.

MySQL Management

phpMyAdmin is a multilingual web-based tool to manage MySQL database. You can download phpMyAdmin via <http://www.phpmyadmin.net>.

Please follow the steps below or refer to the downloaded phpMyAdmin INSTALL file to install MySQL.

- (1) Unzip phpMyAdmin
- (2) Upload the folder phpMyAdmin to **\\TS-109 IP\Qweb**.
- (3) Open the web browser and go to **http://TS-109 IP/phpMyAdmin**.

Note: Follow the steps below to install and configure phpMyAdmin 2.10.2:

1. Use notepad to edit the file config.sample.inc.php in the folder phpMyAdmin
2. Find `$cfg['blowfish_secret'] = '';`
3. Enter a value for " in the last step; for example, `$cfg['blowfish_secret'] = 'myNAS';`
4. Find `/* Authentication type */`
5. Following the texts in the last step, enter
`$cfg['Servers'][$i]['user'] = 'root';`
`$cfg['Servers'][$i]['password'] = 'admin';`
6. Save config.sample.inc.php as config.inc.php, and upload to **\\TS-109 IP\Qweb\phpMyAdmin**
7. Enter the administration page of phpMyAdmin, and change your password immediately.

Chapter 8 FTP Server

TS-109 supports FTP service. To use FTP service, enable this function in **Network Settings** and follow the steps below:

FTP Service

☒ Enable FTP Service

Protocol type: ☐ FTP (standard) ☒ FTP with SSL/TLS (Explicit)

Port Number:

Unicode Support: ☐ Yes ☒ No

Enable Anonymous: ☒ Yes ☐ No

Passive FTP Port Range

☐ Use the default port range (55536 - 56559)

☒ Define port range: -

Maximum number of all FTP connections:

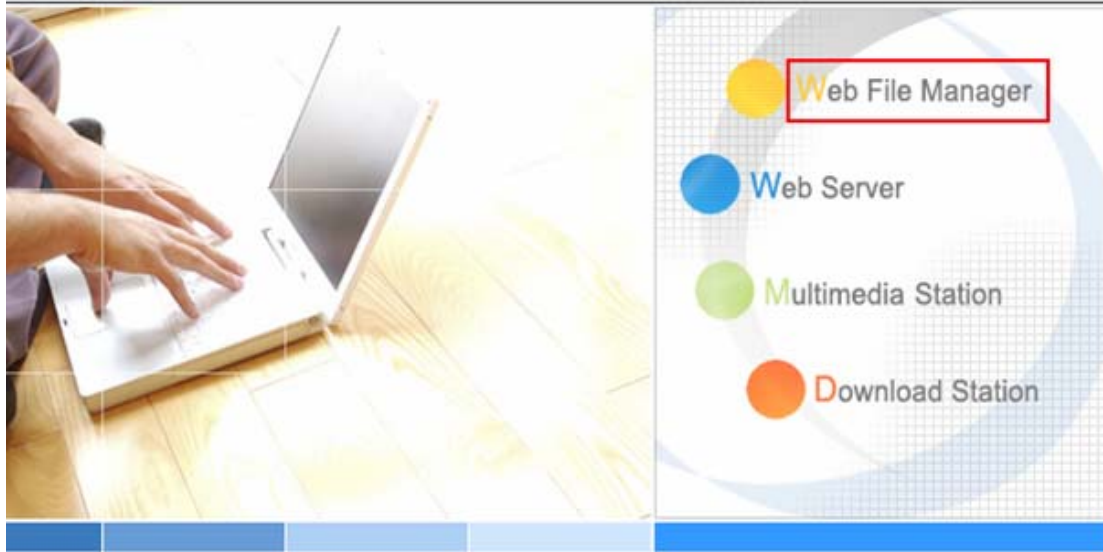
Maximum number of connections for a single account:

☐ Enable FTP transfer limitation(0 means unlimited)

Single connection: Maximum download rate (KB/s): KB/s * Maximum upload rate (KB/s): KB/s

Note: If your FTP client does not support Unicode, please select "No" for Unicode Support and select a supported filename encoding from **[Filename Encoding Setting]** under **[System Settings]** so that the folders and files on FTP can be properly shown.

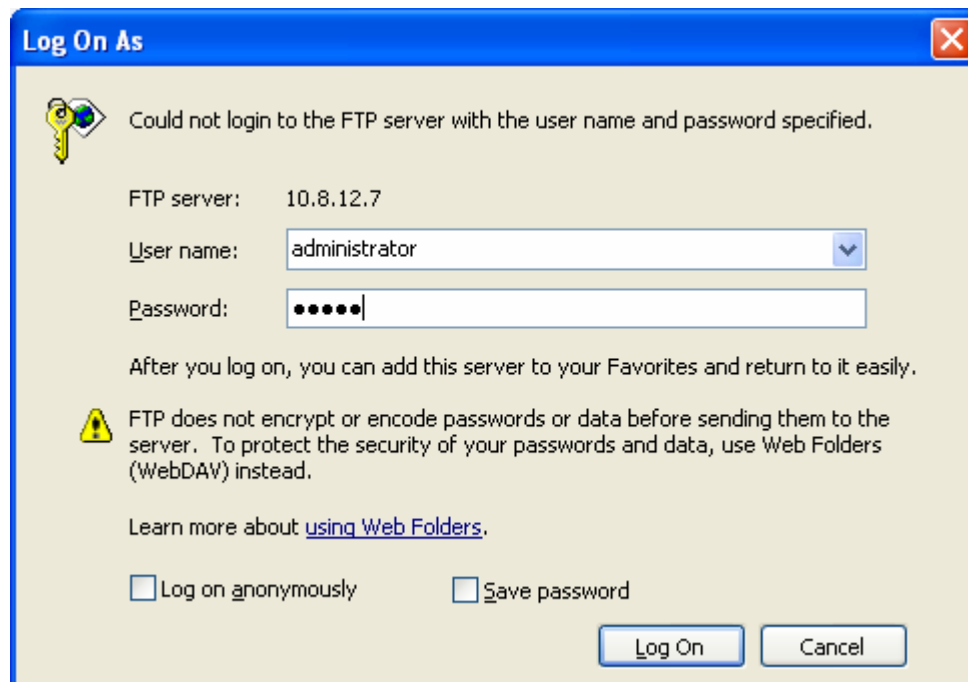
1. Open an IE browser and enter **ftp://[TS-109 IP]** or **ftp://[TS-109 name]**. OR
2. By Web File Manager of TS-109.
 - a. Go to TS-109 administration page and click **Web File Manager**. Enter user name and password to login TS-109.



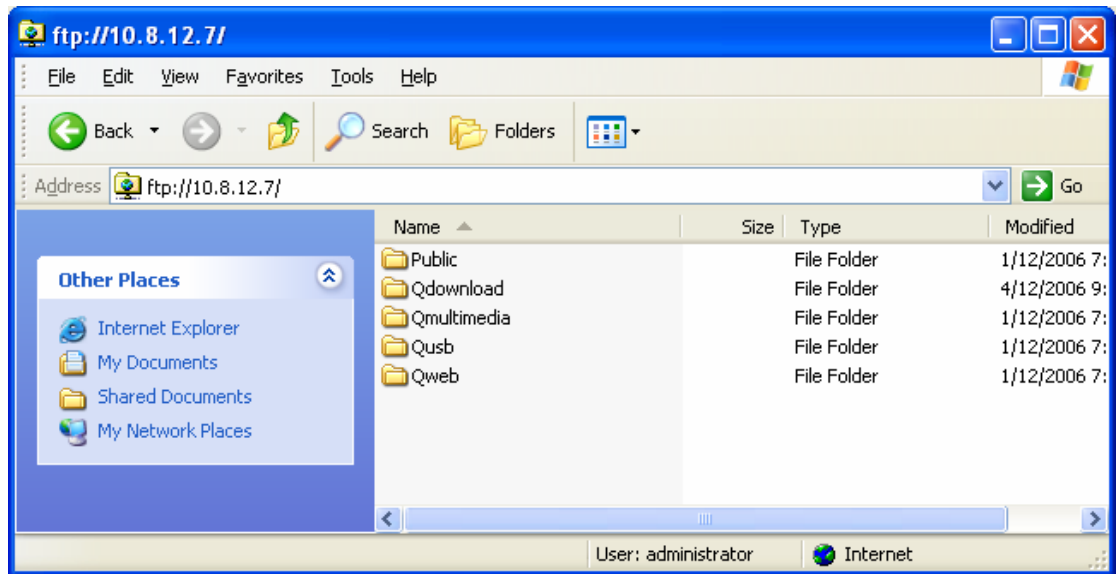
b. Click **FTP**.



c. Enter the user name and password to login FTP service.



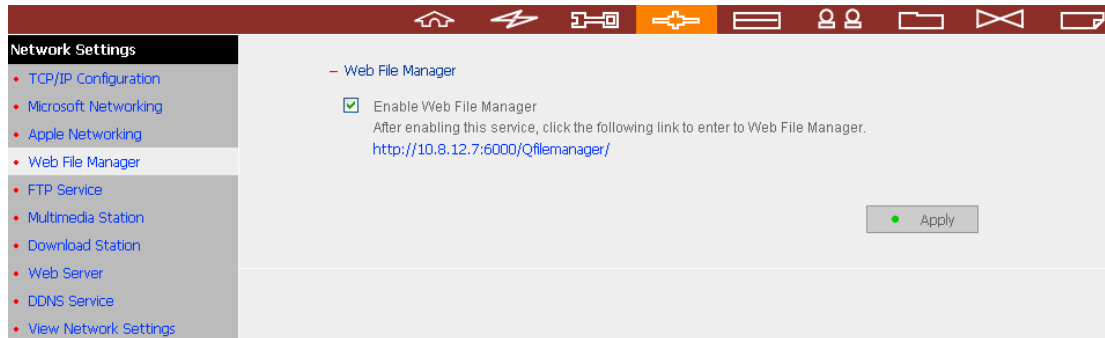
d. You can start to use FTP service.



Chapter 9 Web File Manager

Using Web File Manager

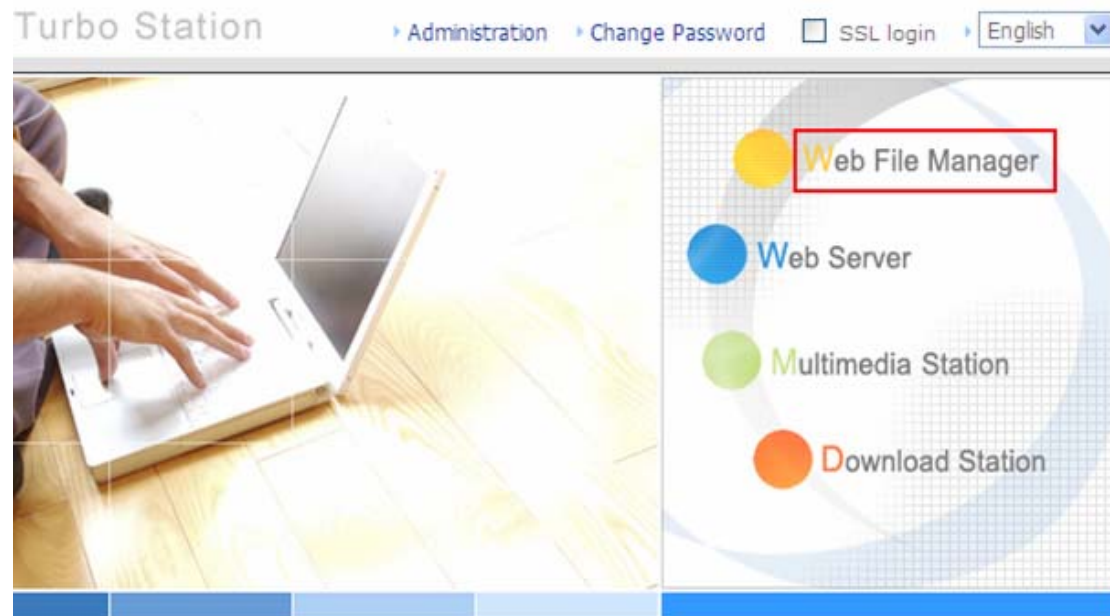
To use Web File Manager, enable web service in Network Settings first.



Launch the web browser and go to TS-109 administration page. Select **Web File Manager** and enter the correct login name and password. You can login as "guest" to access the network shares open to guest access on TS-109. The login password of guest is **guest**.



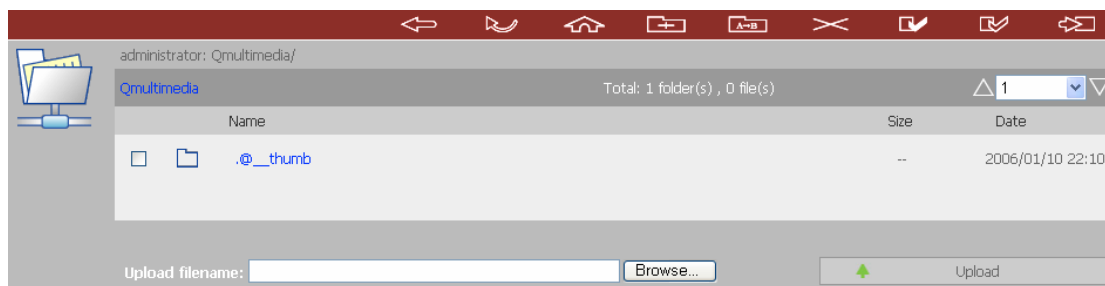
Note: Make sure a network share has been created before using Web File Manager.



Select an existing network share for management.




You can organize network share folders of TS-109. With Web File Manager, you can upload, rename, or delete files and folders in the network shares.




View files online

Click on a file displayed on the web page. The information of the file will be displayed. If your browser does not support the file format, a download window will pop up automatically. Download the file and you can open it on your PC.


Create folder

- Select a network share or folder in which you want to create a new folder.
- Click  (Create Folder) on the toolbar.
- Enter the name of the new folder and click **OK**.

Rename file or folder

- i. Select a file or folder to rename.
- ii. Click  (Rename) on the toolbar.
- iii. Enter the new file or folder name and click **OK**.

Delete file or folder

- i. Select a file or folder to delete.
- ii. Click  (Delete) on the toolbar.
- iii. Confirm to delete the file or folder.

To delete all files and folders, click  (Select All) and  (Delete).


Upload file

- i. Open the folder to upload file to.
- ii. Click **Browse** to select the file.
- iii. Click **Upload**.

Download file

- i. Select a file to download.
- ii. Right click the mouse and select "Save Target As" to save the file.

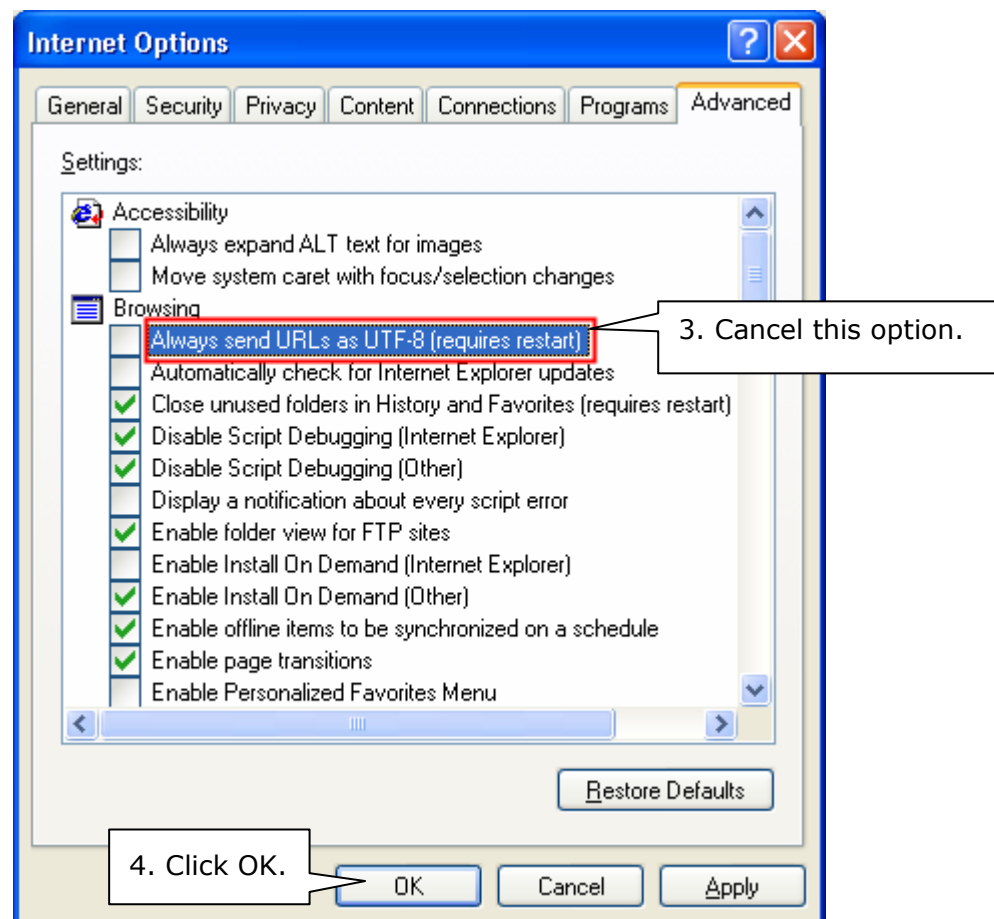
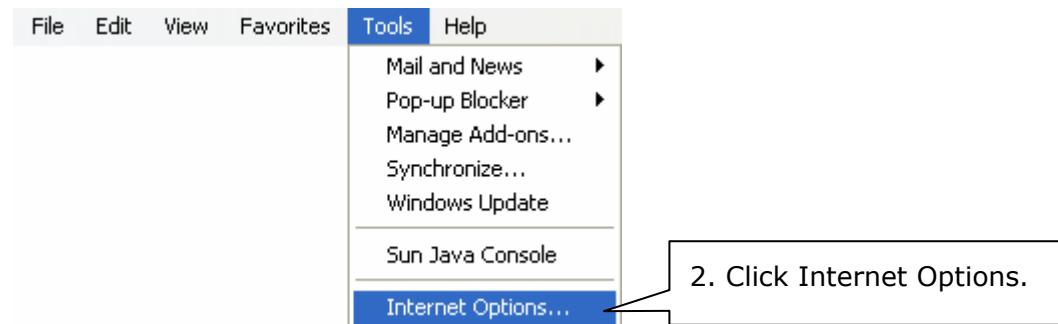
Logout

To exit Web File Manager, click  (Logout).

View Files Named in Local Language













To view files named in Chinese, you may have to configure the browser settings. Take Internet Explorer as an example, follow the steps below to configure the settings.

1. Click on **Tools** in IE browser.



5. Restart the browser.

Web File Manager Icons

Icon	Description
	Return to the parent folder
	Refresh the current page
	Return to network share list home page
	Create folder
	Rename file or folder
	Delete file or folder
	Select all
	Cancel selection
	Logout
	Full access network share folder
	Read-only network share folder
	Malfunction network share folder

Chapter 10 NetBak Replicator

NetBak Replicator is a powerful program installed in user's system (Windows® OS only) for data backup. You can back up any files or folders on local PC to specified share folder on TS-109 by LAN or WAN.

Main Functions

1. Backup

- Instant Backup

You can select files and folders on local PC and back up files to specified network share folder on TS-109 immediately.

- File Filter

You can select particular file types to be excluded from backup. The system will filter all files belonging to these file types when backing up data.

- Schedule

You can specify a schedule for backing up data with this option, e.g. 12:00 every day or 05:00 every Saturday.

- Monitor

When this option is enabled, the system will upload all files or folders to the server instantly for backup when the files or folders are modified.

2. Restore

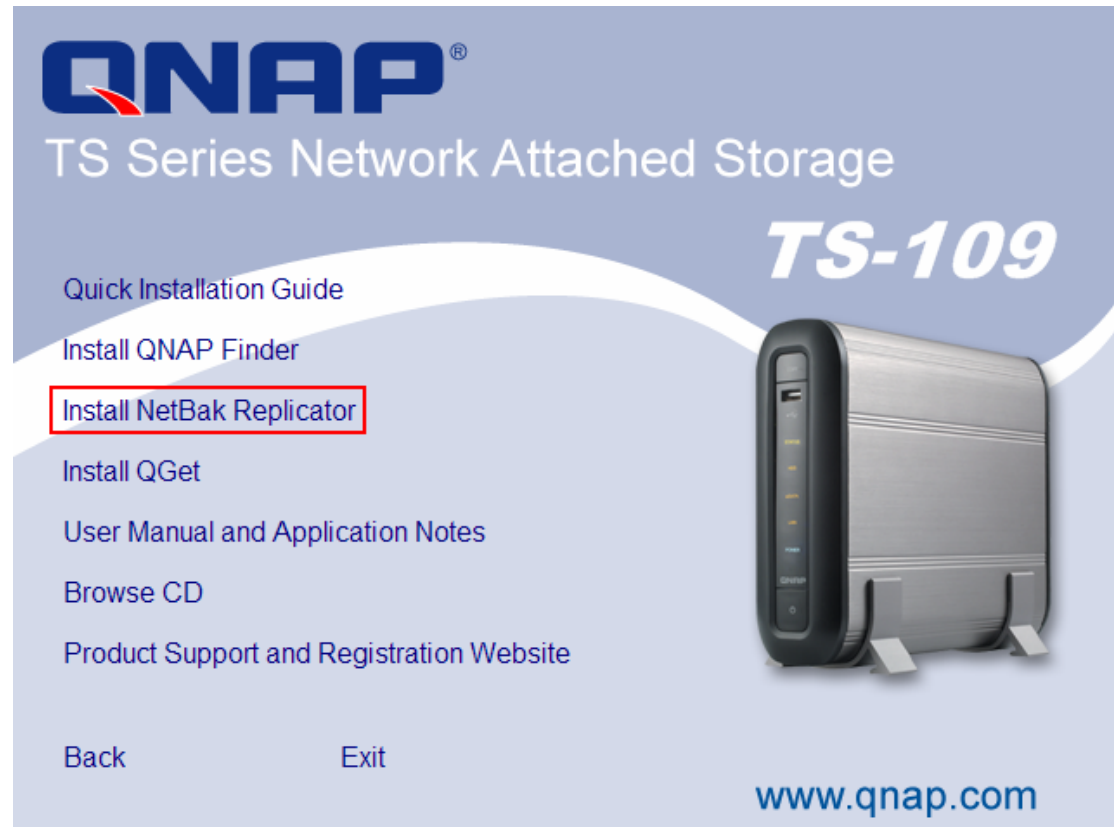
Select this option to restore backed up data to the original location of the file or to a new directory.

3. Log

Enable this option to record events of NetBak Replicator, e.g. the time when NetBak Replicator starts and terminates.


Install NetBak Replicator

1. Select **Install NetBak Replicator** in TS-109 CD-ROM.



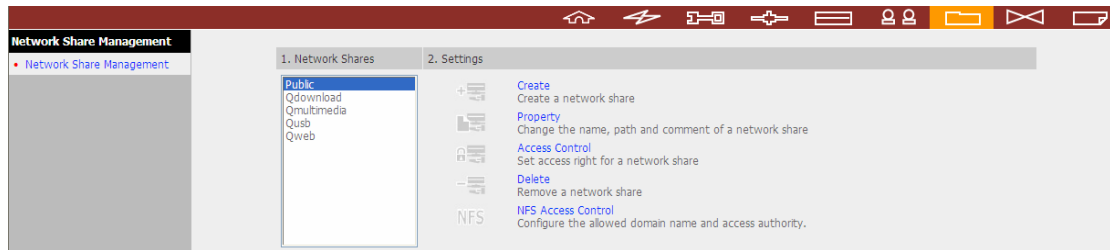
2. Follow the steps to install NetBak Replicator.




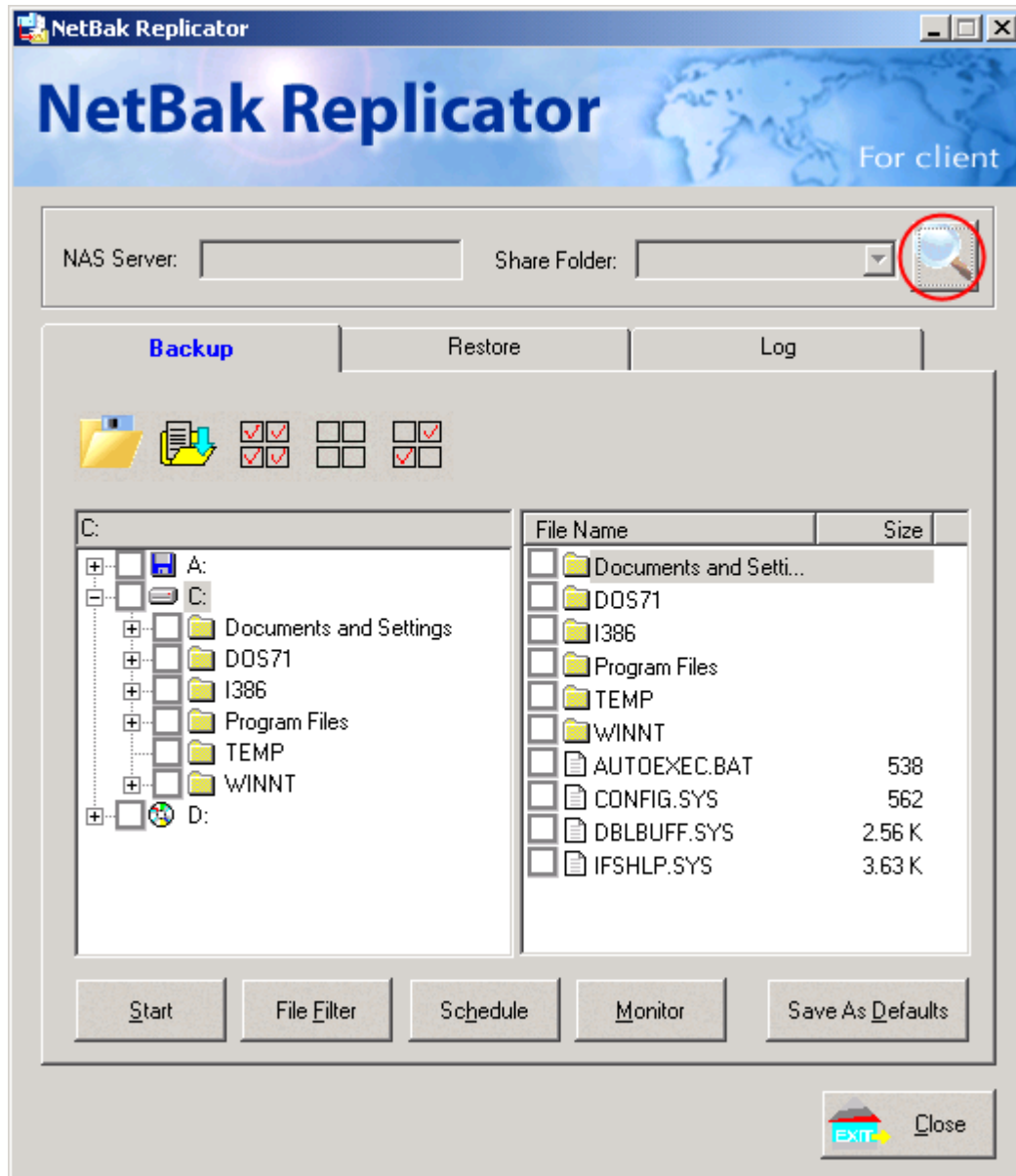
3. Upon successful installation, a shortcut icon  will be shown on the Desktop. Double click the icon to run NetBak Replicator.

Use NetBak Replicator

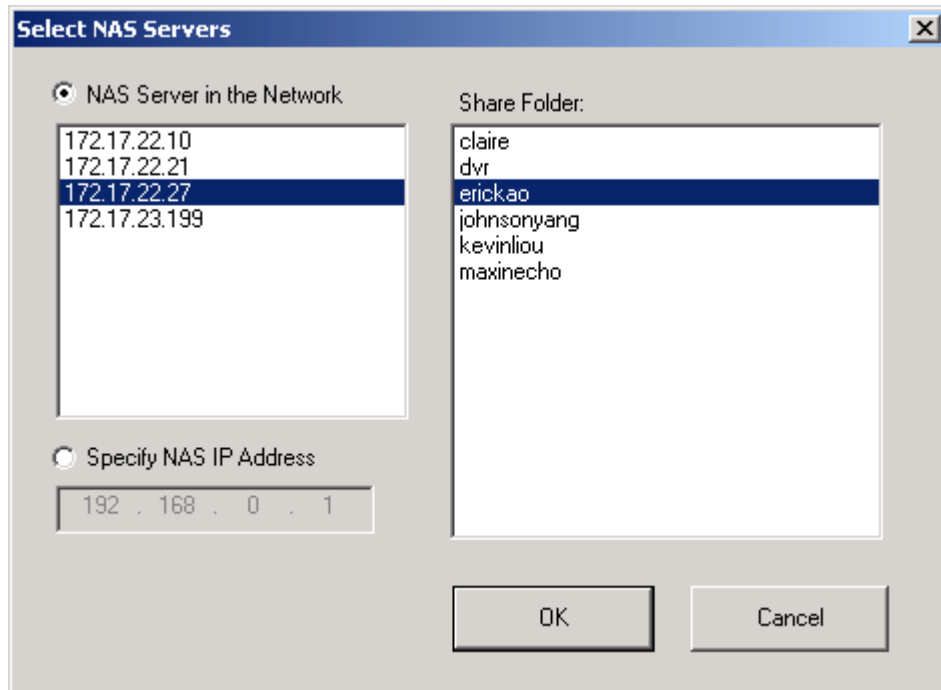
1. Before using NetBak Replicator, please login TS-109 administration and go to **Network Share Management** to create a share folder for backup. Make sure the share folder is open for everyone access or you login the share folder with an authorized account or administrator by NetBak Replicator.



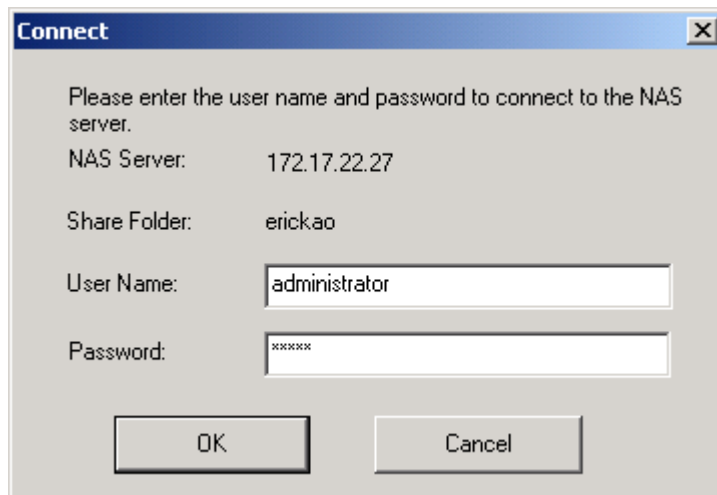
2. Run NetBak Replicator. Click . All TS-109 and their share folders within the network will be displayed.



- When the following window appears, all TS-109 in the LAN will appear on the left list. Select a server and a share folder on the right. NetBak Replicator also supports backup via WAN, you can enter the IP address of TS-109 for data backup directly and select a share folder. Then click **OK**.








- Enter the user name and password to login the server.



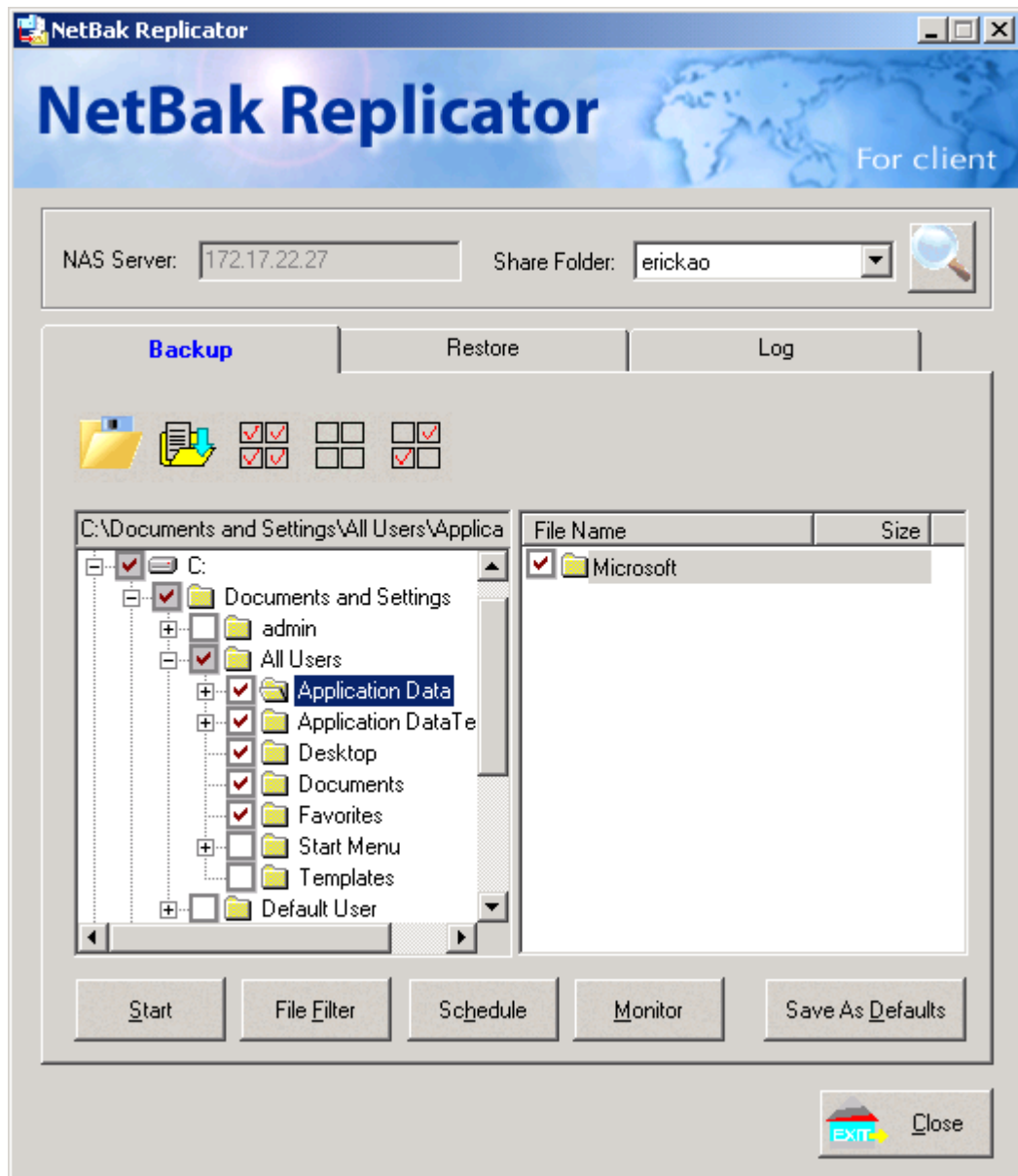
- You can start the backup procedure upon successful connection to the TS-109.

Description of Buttons on NetBak Replicator

	Open Configuration: Open a previously saved NetBak Replicator configuration.
	Save Configuration: Save the settings on NetBak Replicator. The file will be named as *.rpr
	Select All: Select all items in the window.
	Clear All: Clear selection.
	Select My Document: Select all folders in My Document.

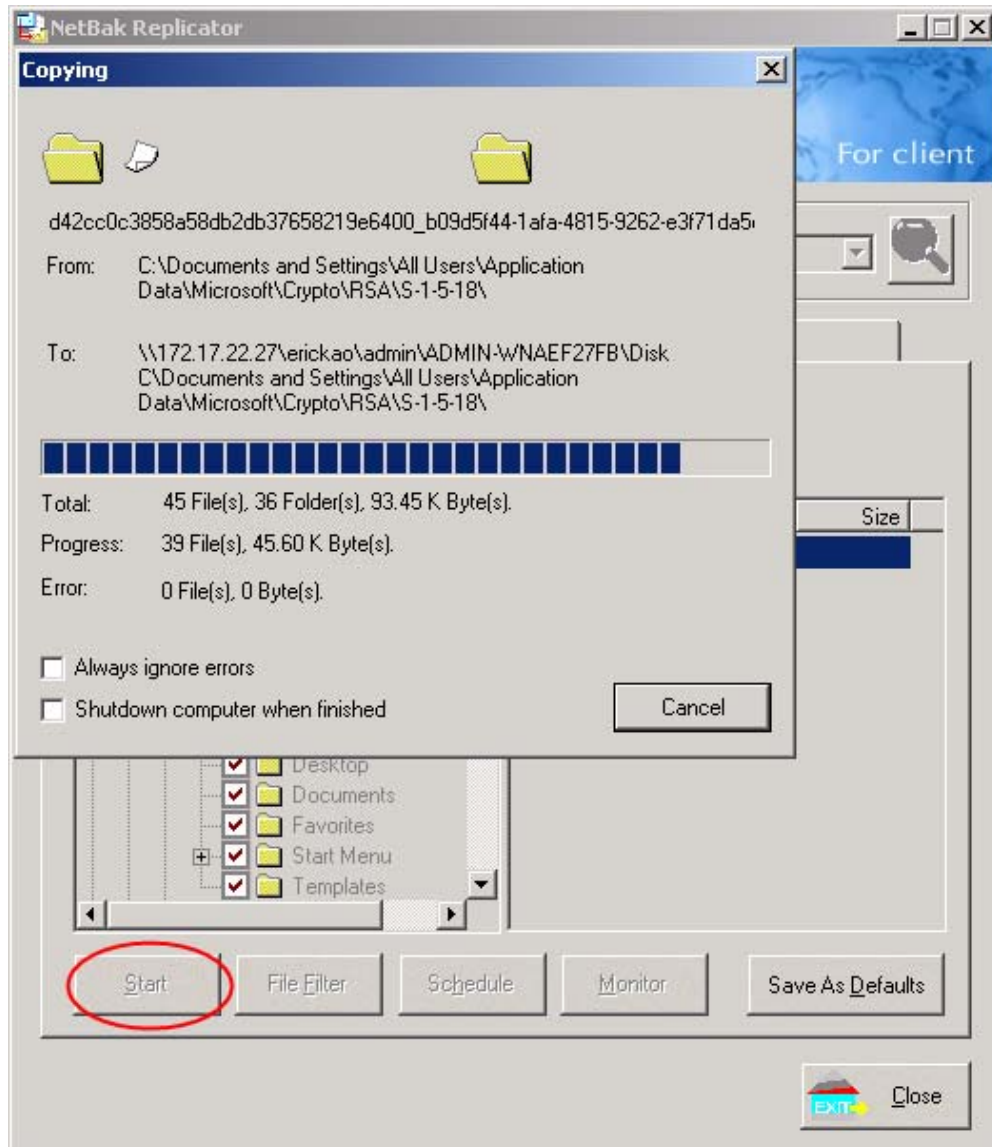
- **Backup**

Select files and folders for backup.



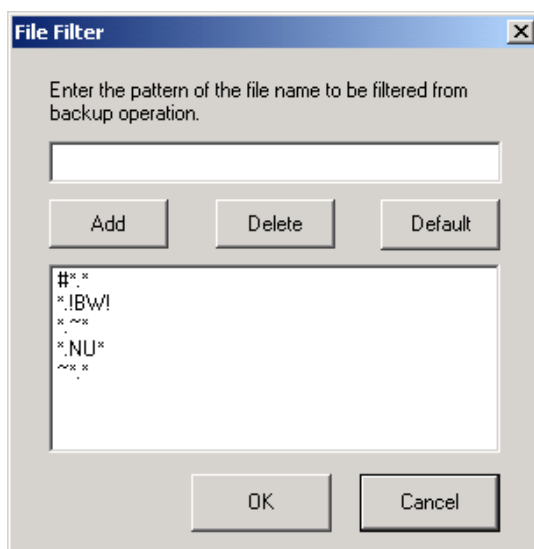
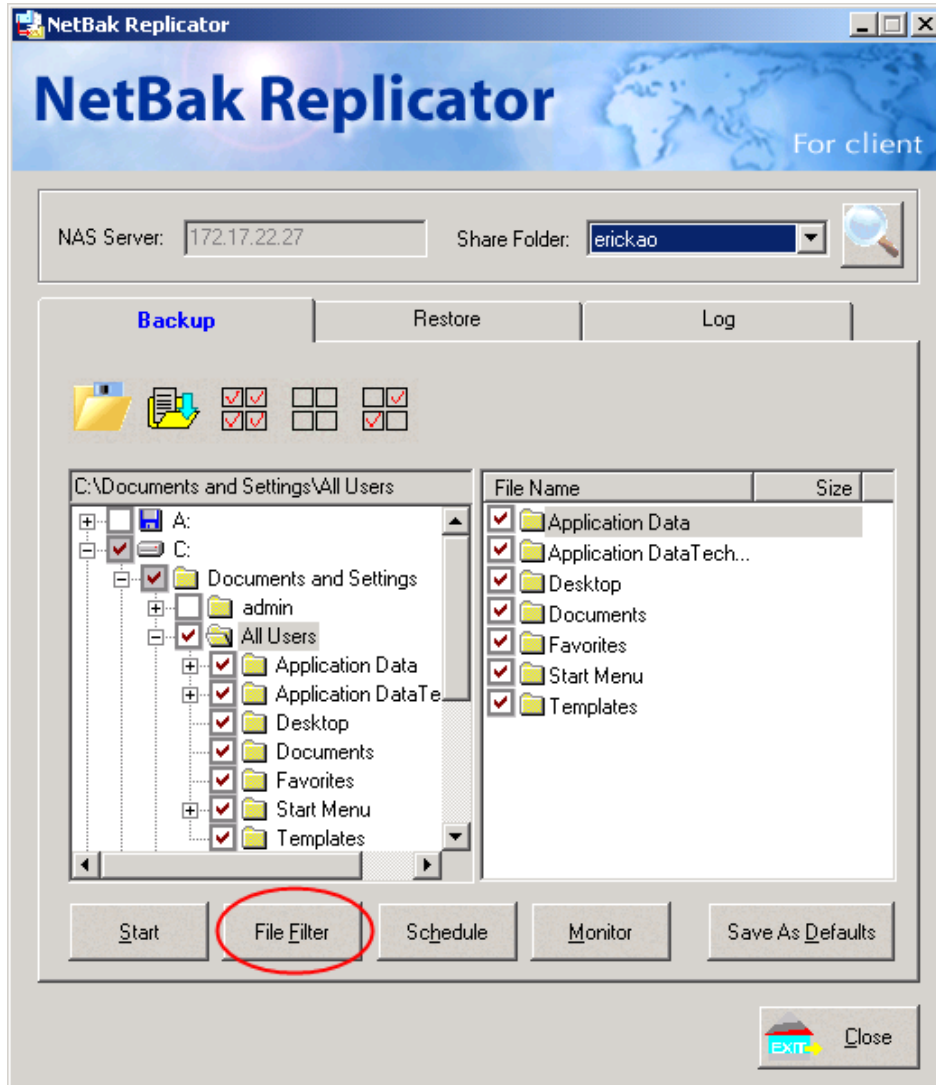
✓ Start

When you have selected the files for backup to TS-109, click **Start** on NetBak Replicator. The program will start to copy the selected files to the specified share folder on TS-109.



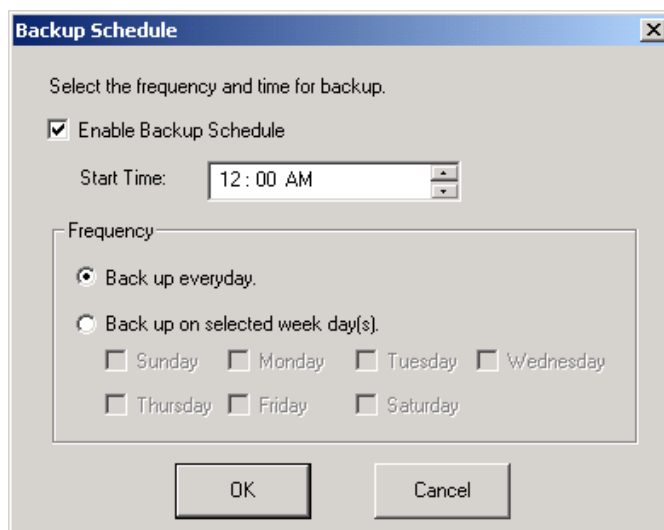
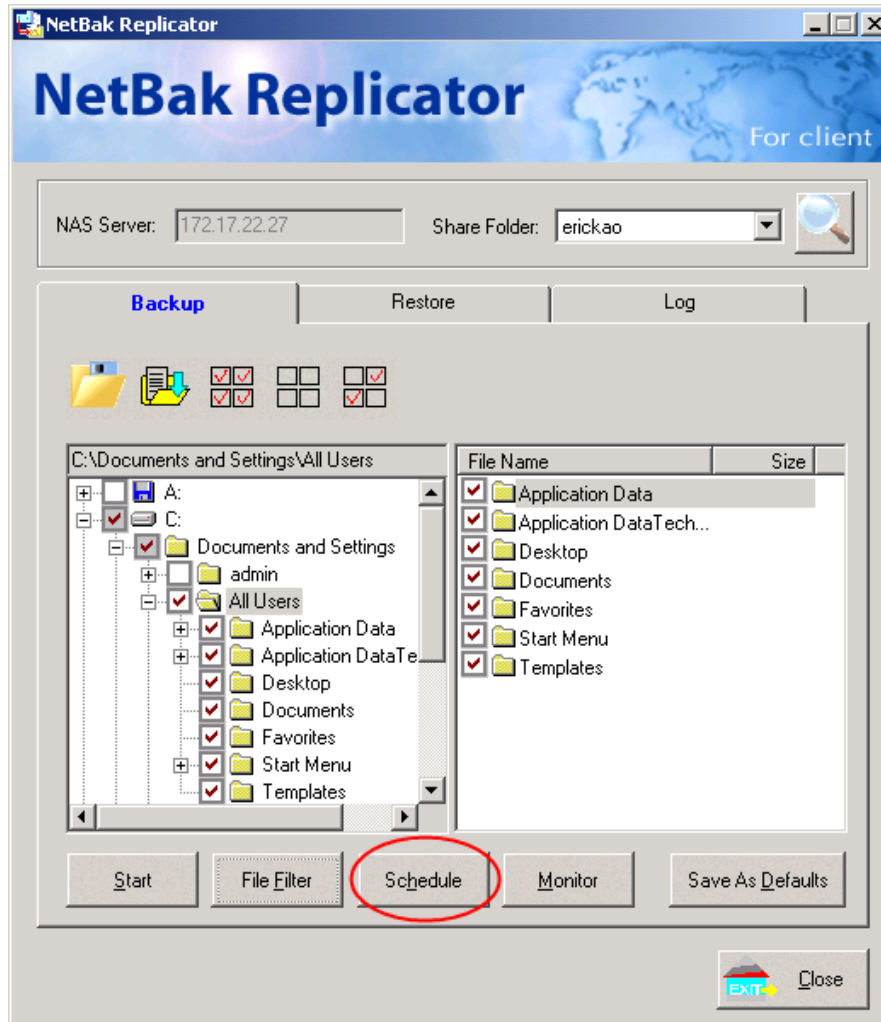
✓ File Filter

Click **File Filter** on NetBak Replicator main page to select file format to be skipped from backup. Then click **OK**.




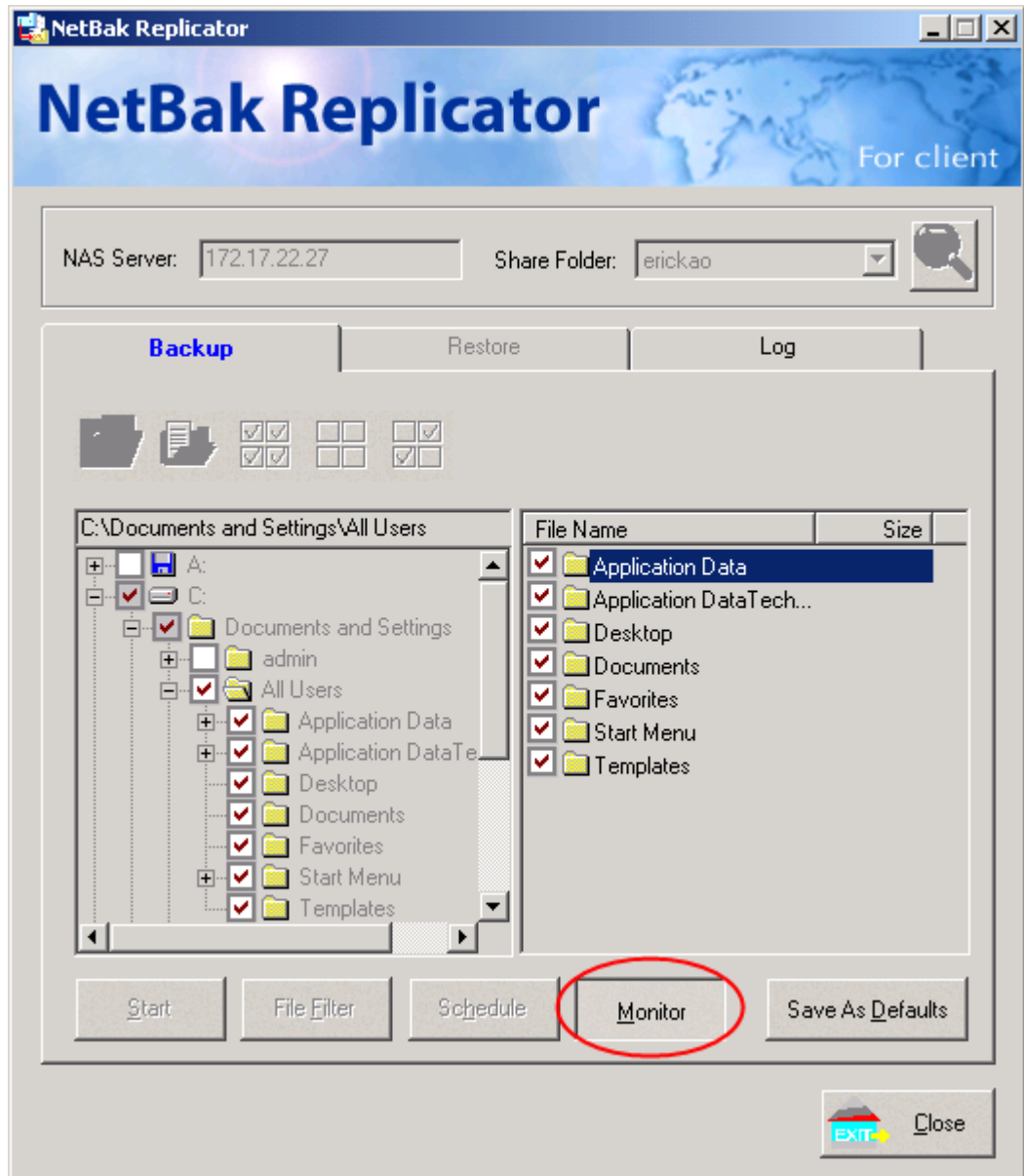
✓ Schedule

Click **Schedule** on NetBak Replicator main page. Then check the box "Enable Backup Schedule" and select the frequency and time for backup. Click **OK** to confirm.



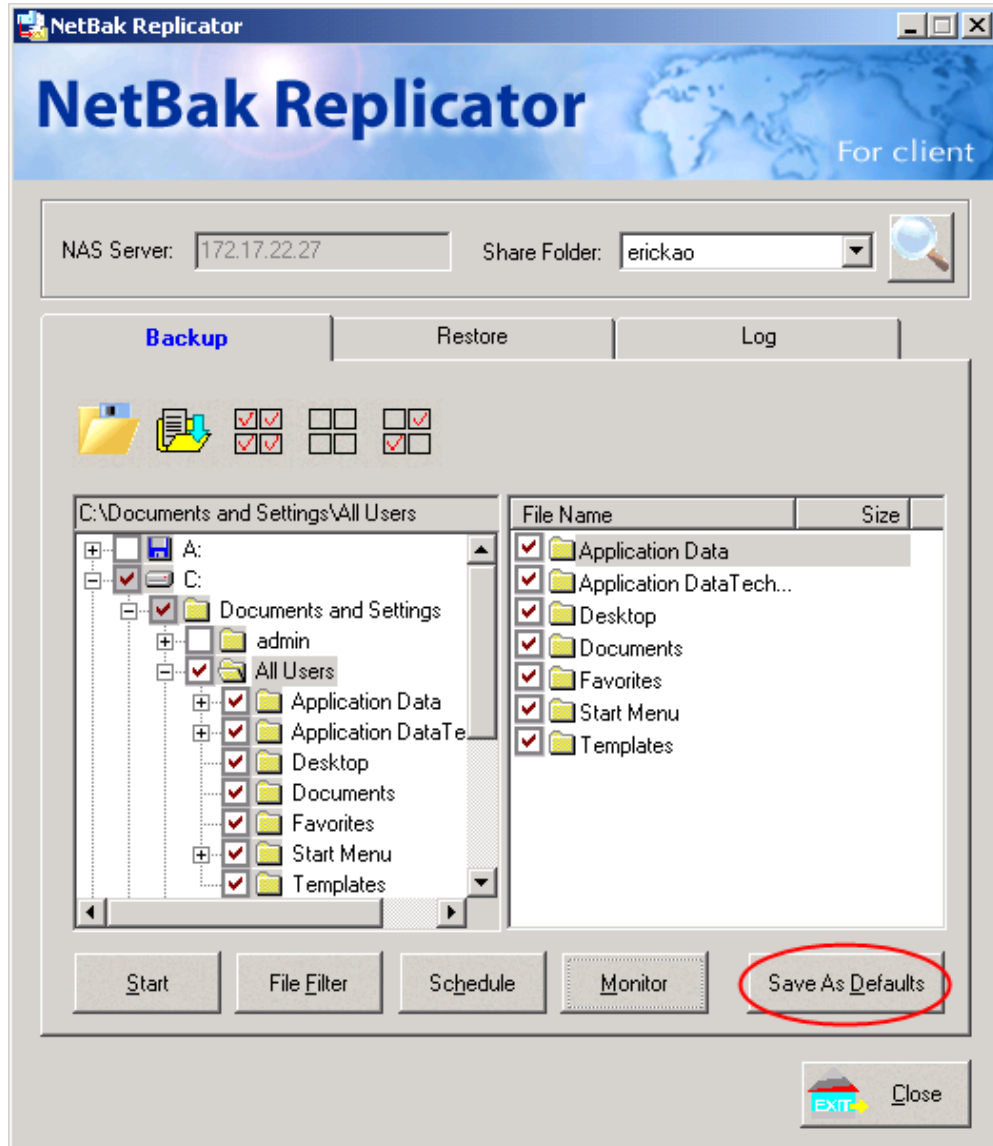
✓ Monitor

Select a folder for monitoring. When this option is enabled, the system will upload all files or folders to the server instantly for backup when the files or folders are modified. Other files will be gray and cannot be selected. Click **Monitor** again to cancel monitoring. An icon  will appear on task bar of Windows® when monitoring is in process.




✓ Initialize Configuration

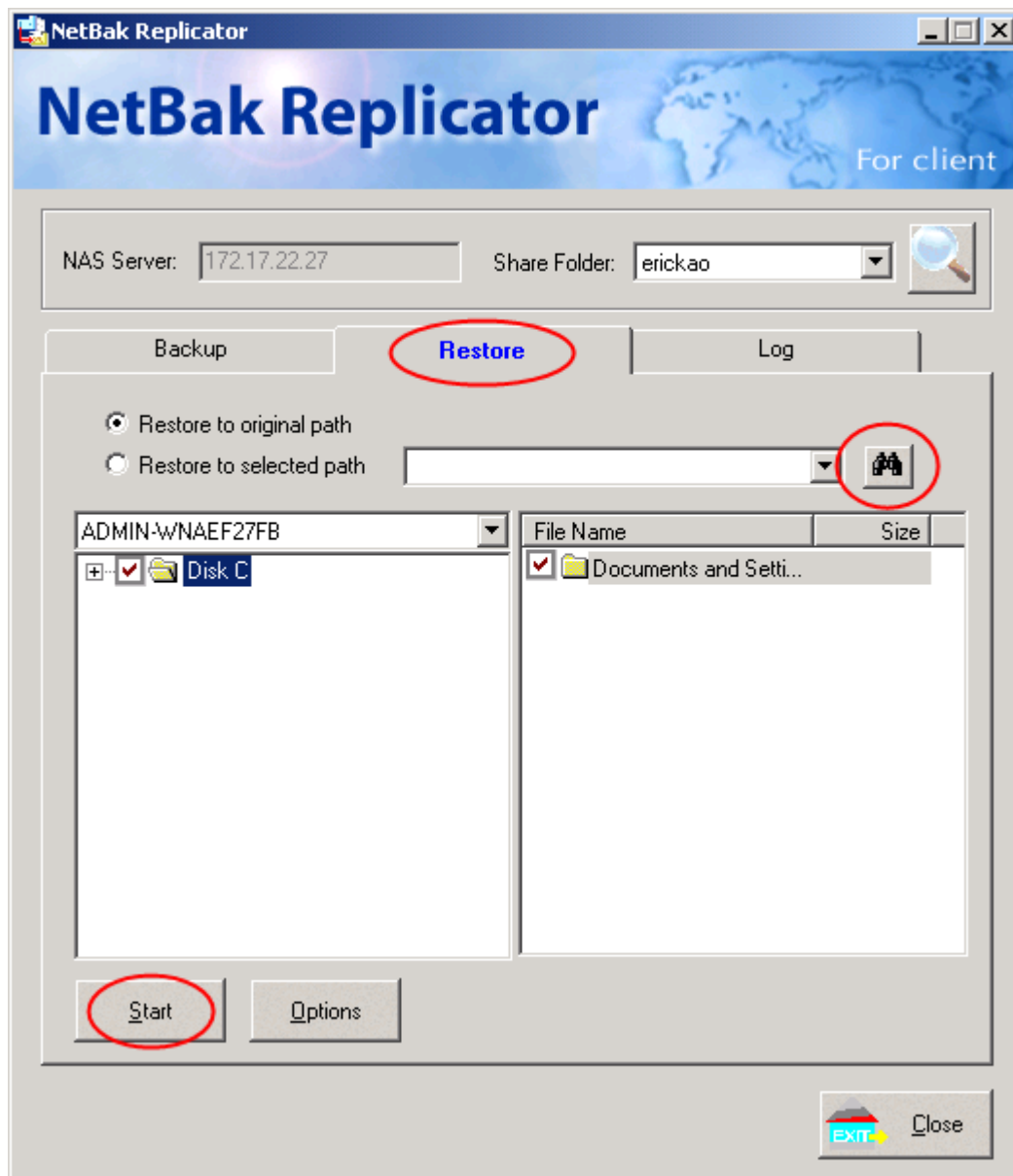
When using this function, NetBak Replicator will record all current settings of the user, including whether or not monitor function is enabled. When the user login again, this program will load the previous recorded settings for users to manage data backup.



- **Restore**

Please follow the steps below to restore files from TS-109 to your PC.

- a. Restore to original position: Select the location that the data will be restored to.
- b. Select new restore position: Click  to select the directory to restore data to or select a previously chosen location from the drop-down menu.
- c. Select the folder(s) and sub-folder(s) for restoring data on the right list and click **Start**.



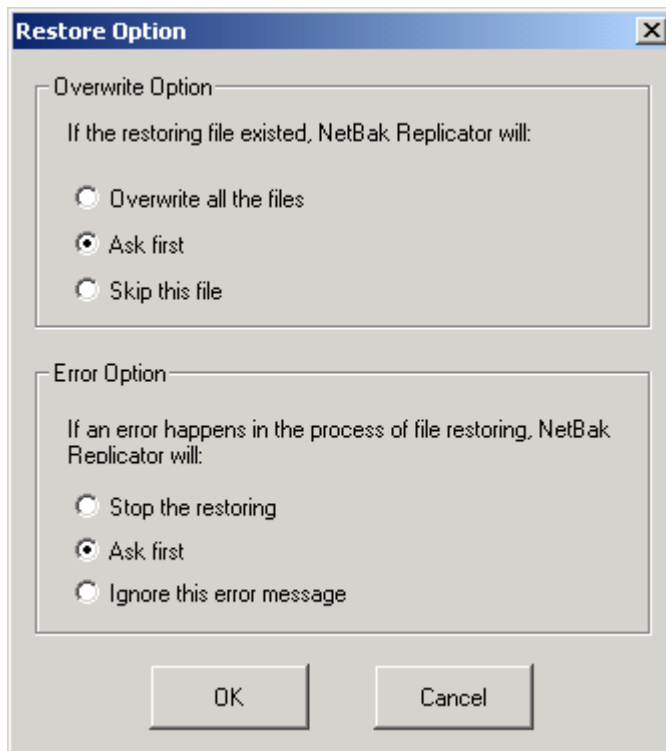
d. Option: Select recovery option and error option.

If the restoring file existed, NetBak Replicator will:

- ✓ Overwrite all the files
- ✓ Ask first
- ✓ Skip this file

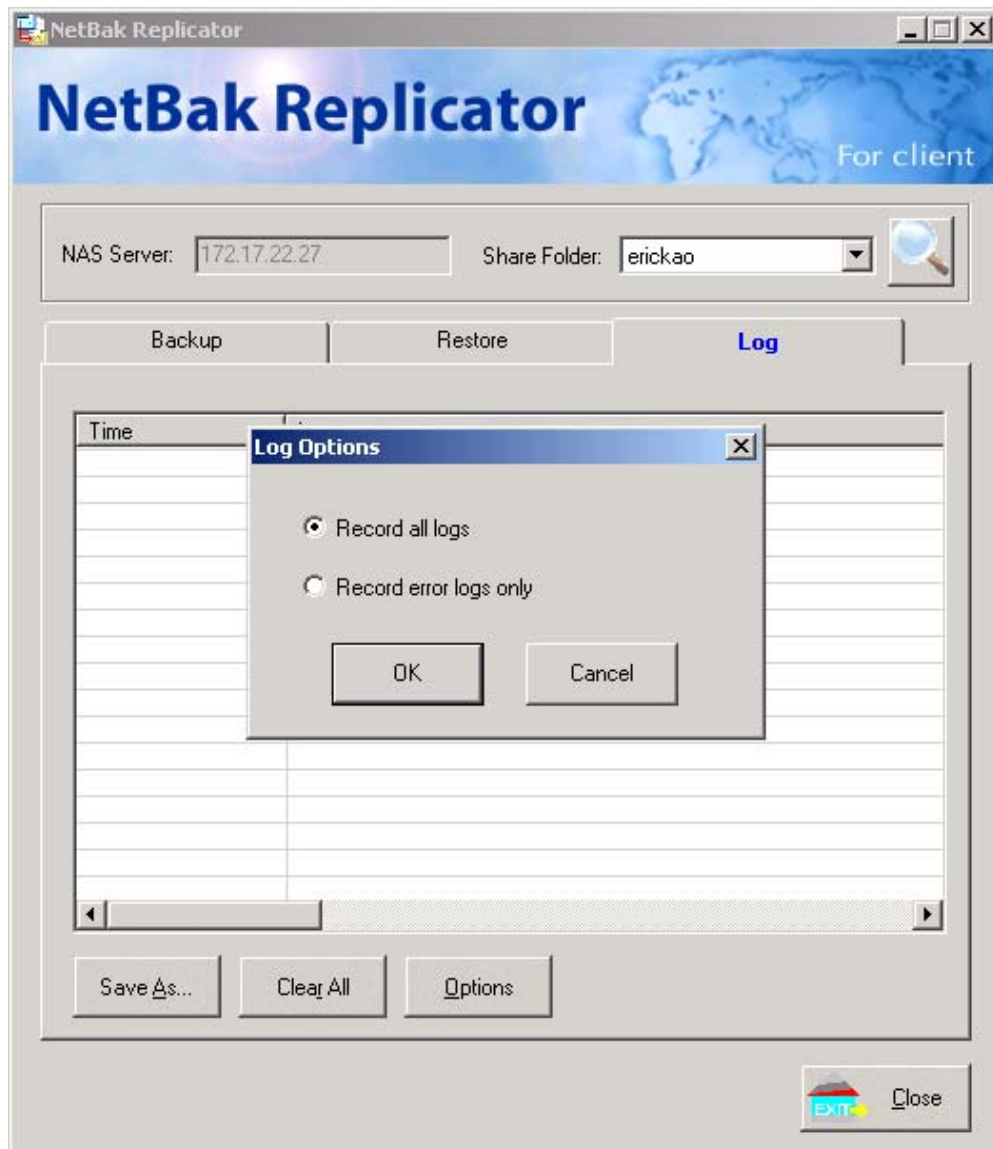
If an error happens in the process of file restoring, NetBak Replicator will:

- ✓ Stop the restoring
- ✓ Ask first
- ✓ Ignore this error message



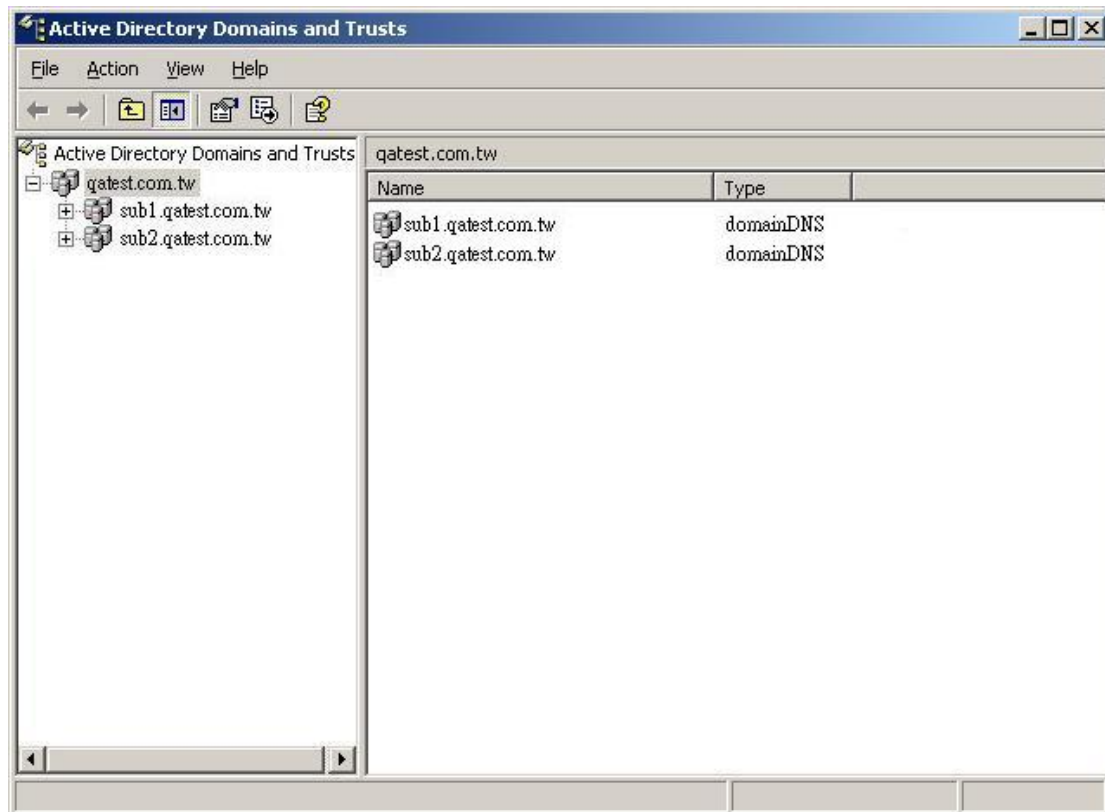
- **Log**

- a. Save As...: To save all logs on NetBak Replicator, click this button. All logs will be saved as text file.
- b. Clear All: Click this button to clear all logs.
- c. Option: Select the type of logs to be recorded— "Record all logs" or "Record error logs only".



Chapter 11 Configuring AD Authentication

AD environment mixed mode can be supported by TS-109. For example, qatest.com.tw and sub2.qatest.com.tw are domains controlled by Windows 2003 server, and sub1.qatest.com.tw domain is controlled by Windows 2000 server.



Please make sure you have enabled the Active Directory Service on the Windows Server and check the following items:

- TS-109 DNS server setting must be assigned to AD server.
- TS-109 and AD server can synchronize only if their time difference is less than 5 minutes.
- TS-109 and AD server will synchronize every 5 minutes. To configure the settings manually, TS-109 has to be set as standalone mode and then added to AD domain.
- After adding to AD domain, you must login as Domain_name\Username to access Network Neighborhood. Local users of TS-109 cannot access the server by Network Neighborhood.
- It is suggested to use Windows 2000 Service Pack 4, or Windows 2003

Service Pack 1.

- When TS-109 is added to AD domain, the authority of "everyone" will not work, "everyone" is the default account of TS-109, but is not supported in AD domain. Therefore the authority has to be reset.
- The IP address of the AD server should be recorded in the DNS settings on the AD server.
- You must change the password of "administrator" after you create "Active Directory" service on the AD server.
- The DNS server on the AD Server should have two records on it. For example, when the AD server name is 2003tc.testad.com, the records will be:

2003tc.testad.com A 192.168.1.100

Testad.com A 192.168.1.100

One is "A record" for AD server, and the other is the domain "A record" for DNS queries.

Adding TS-109 to Windows Server 2003 Active Directory Domain

1. Go to TCP/IP Configuration in Network Settings. Enter the IP address of primary DNS server. You can inquire AD domain via this DNS server.

The screenshot shows the 'TCP/IP Configuration' window. Under the 'Use static IP address' section, the 'Primary DNS Server' field is highlighted with a red rectangle. The IP address 172.17.21.131 is entered in this field. Other fields include Fixed IP Address (172.17.21.125), Subnet Mask (255.255.254.0), and Default Gateway (172.17.20.1).

2. Go to Microsoft Networking of Network Settings. Enable AD Domain Member, and enter the domain name and the user name with administrator access right to that domain.

– Microsoft Networking

☒ Enable file service for Microsoft networking

☐ Standalone Server

☒ AD Domain Member

Server Description:


Workgroup:

AD Server Name:

Domain Name:


Domain Username:

Password:


 **Note:**

- a. Make sure that a fully qualified domain name such as AD.local has been filled in.
- b. Make sure the user name with administrator access right to that domain.

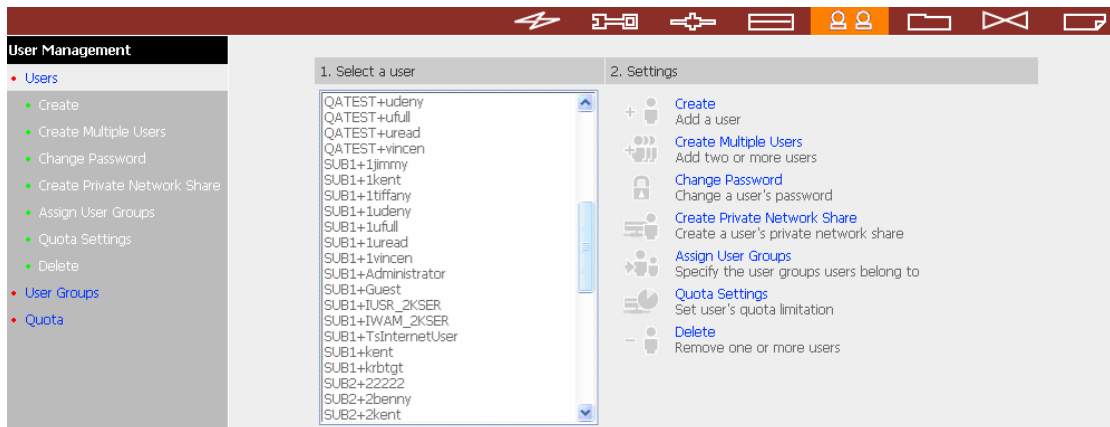
3. When the following message appears after applying the settings in step 2, check the time zone settings. Make sure the difference of your time and that of AD server is less than 5 minutes. If the time difference is larger than 5 minutes, you will not be able to add the domain member.

 **Microsoft Networking**

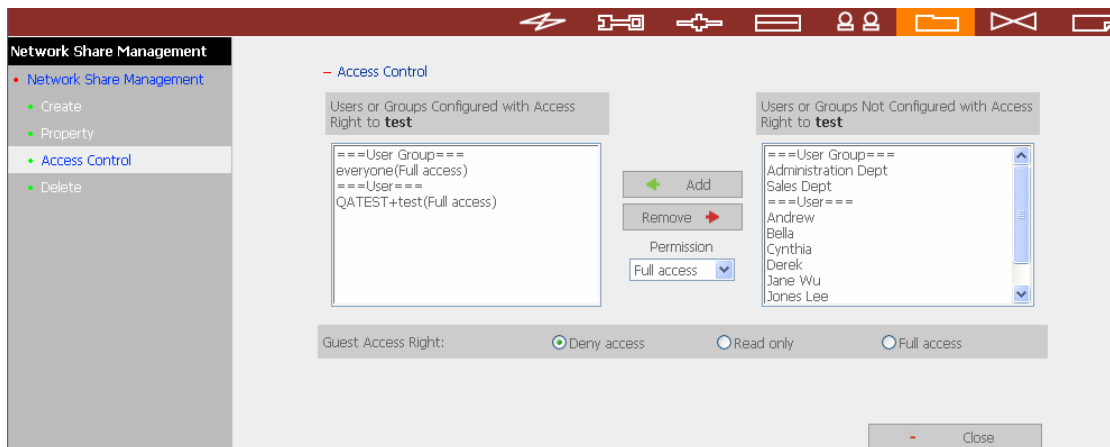
Microsoft Networking configured failed. Please synchronize time with Windows server.

 Back

4. Upon successful adding of domain member, you can view the list for domain users and local users in User Management.

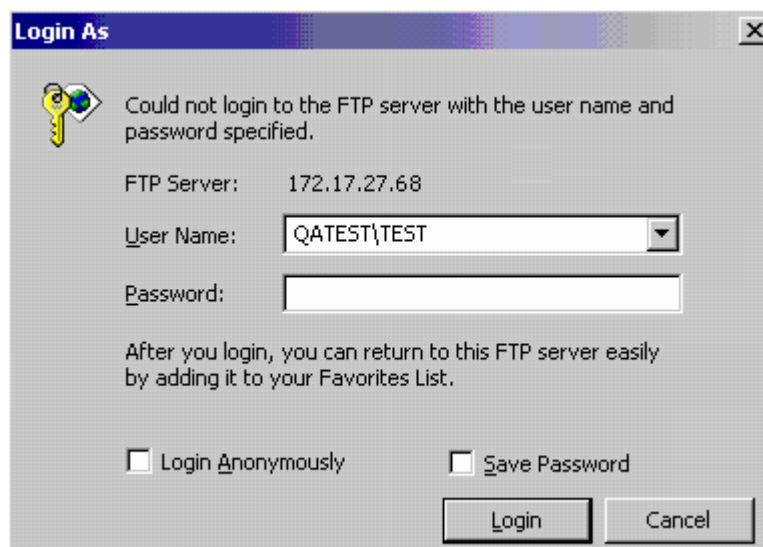


5. Go to Access Control in Network Share Management to configure the access control right of AD users for all available network shares.



Using AD users to access services

To access services like FTP, Network Neighborhood, or Apple Talk with an AD user account, add **DomainName** before the user name when logging in.



Chapter 12 Access TS-109 via Linux OS

In addition to Microsoft and Mac OS, TS-109 also supports Linux systems through the NFS service:

1. In Linux, run the following command:

```
mount -t nfs <TS-109 IP address>:/<Network Share Name>  
<Directory to Mount>
```

For example, if the IP address of your TS-109 is 192.168.0.1 and you want to link the network share folder "public" under the /mnt/pub directory, use the following command:

```
mount -t nfs 192.168.0.1:/public /mnt/pub
```



Note: You must login as "root" user to initiate the above command.

2. Login as the user ID you define, you can use the mounted directory to access your network share files.

Chapter 13 TS-109 Maintenance

This section provides a general overview on system maintenance.

13.1 Restart/ Shut down Server

Follow the steps below to restart or shut down TS-109.

1. Enter the administration page and select Restart/ Shutdown in System Tools.
2. Click **Restart** to reboot the server or **Shut Down** to turn off the server.



13.2 Reset Administrator Password and Network Settings

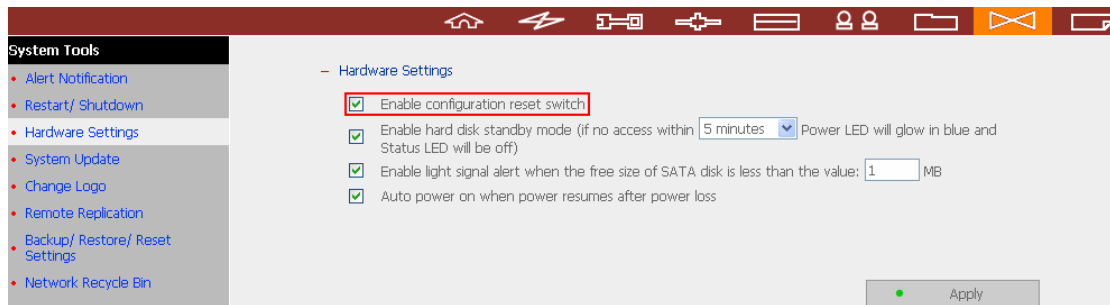
To reset the administrator password and network settings of TS-109,

1. Press the reset button of TS-109 for a few seconds. A beep sound will be heard.
2. Login TS-109 with the default user name and password:

Default user name: **admin**
Password: **admin**



Note: To reset the system by the reset button, the option "Enable configuration reset switch" in Hardware Settings must be activated.



13.3 Disk Failure or Malfunction

When you encounter disk malfunction or failure, please do the following:

1. Record the malfunction status or error messages shown in Event Logs.
2. Stop using the failed TS-109 and turn off the server.
3. Contact customer service for technical support.



Note: TS-109 must be repaired by professional technicians, do not try to repair the server yourself.
Please back up any important files or folders to avoid potential data loss due to disk crash.

13.4 Power Outage or Abnormal Shutdown

In case of power outage or improper shutdown of TS-109, the system will resume to the state before it is shut down. If your server does not function properly after restart, please do the following:

1. If the system configuration is lost, configure the system again.
2. In the event of abnormal operation of the server, contact customer service for technical support.

To avoid the above situations, please back up your data periodically and make sure you have done the following:

- Follow the instructions described in Chapter 13.1 to restart or shut down the server.
- If there is an anticipated power outage, back up all important data and turn off the server properly until power supply is resumed.

Technical Support

QNAP provides dedicated online support and customer service via instant messenger. You can contact us by the following means:

Online Support: http://www.qnap.com E-mail: support@qnap.com MSN: support@qnap.com SKYPE: qnapskype
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Technical support for North America users:

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